

# **FUNAI** **SERVICE MANUAL**

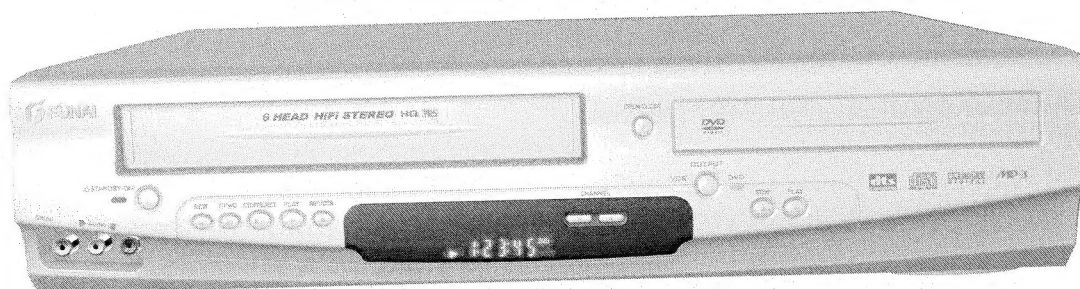
## **Main Section**

- Specifications
- Preparation for Servicing
- Adjustment Procedures
- Schematic Diagrams
- CBA's
- Exploded views
- Parts List

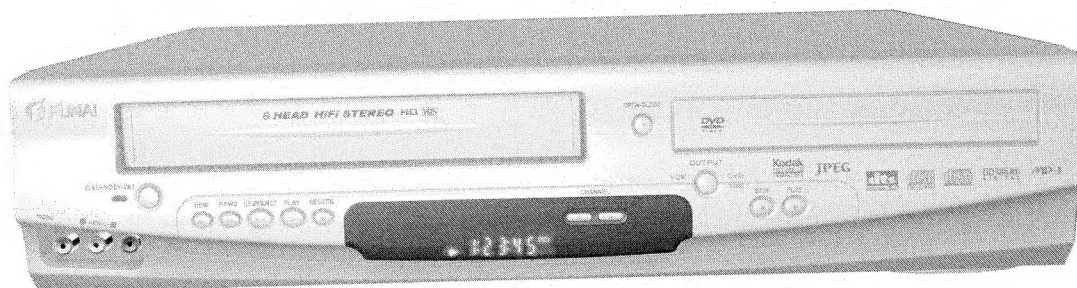
When servicing the deck mechanism, refer to MK14 Deck Mechanism Section.

Deck Mechanism Part No.:  
N25E0FL

## **DVD PLAYER & VIDEO CASSETTE RECORDER DPVR-6600**



## **DPVR-6630**



# MAIN SECTION

## DVD PLAYER & VIDEO CASSETTE RECORDER

### DPVR-6600/DPVR-6630

#### Main Section

- Specifications
- Preparation for Servicing
- Adjustment Procedures
- Schematic Diagrams
- CBA's
- Exploded Views
- Parts List

#### TABLE OF CONTENTS

Specifications .....	1-1-1
Laser Beam Safety Precautions .....	1-2-1
Important Safety Precautions .....	1-3-1
Standard Notes for Servicing .....	1-4-1
Preparation for Servicing .....	1-5-1
Cabinet Disassembly Instructions .....	1-6-1
Electrical Adjustment Instructions .....	1-7-1
How to Initialize the DVD Player & VCR .....	1-8-1
Firmware Renewal Mode .....	1-9-1
Function Indicator Symbols .....	1-10-1
Block Diagrams .....	1-11-1
Schematic Diagrams / CBA's and Test Points .....	1-12-1
Waveforms .....	1-13-1
Wiring Diagram < VCR Section > .....	1-14-1
Wiring Diagram < DVD Section > .....	1-14-2
IC Pin Function Descriptions .....	1-15-1
Lead Identifications .....	1-16-1
Exploded Views .....	1-17-1
Mechanical Parts List .....	1-18-1
Electrical Parts List .....	1-19-1

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# SPECIFICATIONS

## < VCR Section >

Description	Unit	Minimum	Nominal	Maximum	Remark
<b>1. Video</b>					
1-1. Video Output (PB)	Vp-p	0.8	1.0	1.2	SP Mode
1-2. Video Output (R/P)	Vp-p	0.8	1.0	1.2	
1-3. Video S/N Y (R/P)	dB	40	45		SP Mode, W/O Burst
1-4. Video Color S/N AM (R/P)	dB	37	41		SP Mode
1-5. Video Color S/N PM (R/P)	dB	30	36		SP Mode
1-6. Resolution (PB)	Line	230	245		SP Mode
<b>2. Servo</b>					
2-1. Jitter Low	μsec		0.07	0.12	SP Mode
2-2. Wow & Flutter	%		0.3	0.5	SP Mode
<b>3. Normal Audio</b>					
3-1. Output (PB)	dBV	-9	-4	-3	SP Mode
3-2. Output (R/P)	dBV	-9	-4	-1.5	SP Mode
3-3. S/N (R/P)	dB	36	41		SP Mode
3-4. Distortion (R/P)	%		1.0	4.0	SP Mode
3-5. Freq. resp (R/P) at 200Hz	dB	-6	-2		SP Mode
(-20dB ref. 1kHz) at 8kHz	dB	-8	-2		SP Mode
<b>4. Tuner</b>					
4-1. Video output	Vp-p	0.8	1.0	1.2	E-E Mode
4-2. Video S/N	dB	39	44		E-E Mode
4-3. Audio output	dB	-10	-6	-2	E-E Mode
4-4. Audio S/N	dB	40	46		E-E Mode
<b>5. Hi-Fi Audio</b>					
5-1. Output	dBV	-12	-9	-4	SP Mode
5-2. Dynamic Range	dB	70	85		SP Mode
5-3. Freq. resp (6dB B.W)	Hz		20 ~ 20K		SP Mode

**Note:** Nominal specs represent the design specs. All units should be able to approximate these – some will exceed and some may drop slightly below these specs. Limit specs represent the absolute worst condition that still might be considered acceptable; In no case should a unit fail to meet limit specs.

## < DVD Section >

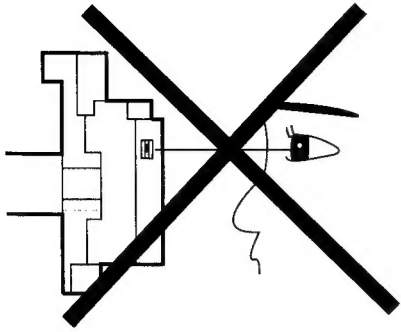
ITEM	CONDITIONS	UNIT	NOMINAL	LIMIT
1. Video Output	75 $\Omega$ load	Vpp	1.0	$\pm 0.1$
2. Optical Digital Out		dBm	-18	
3. Audio (PCM)				
3-1. Output Level	1 kHz 0 dB, 47k $\Omega$ load	Vrms	2.0	
3-2. S/N	47k $\Omega$ load	dB	90	
3-3. Freq. Response				
DVD	fs = 48 kHz $\pm$ 0.5dB, 47k $\Omega$ load	Hz	20~22 k	
CD	fs = 44.1 kHz $\pm$ 0.5dB, 47k $\Omega$ load	Hz	20~20 k	
3-4. THD+N				
DVD	1 kHz 0dB, 47k $\Omega$ load	%	0.01	
CD	1 kHz 0dB, 47k $\Omega$ load	%	0.01	

### NOTES:

1. All Items are measured without pre-emphasis unless otherwise specified.
2. Power supply : 220 - 240 V ~ 50 Hz
3. Ambient temperature : 5 °C ~ 40 °C

# LASER BEAM SAFETY PRECAUTIONS

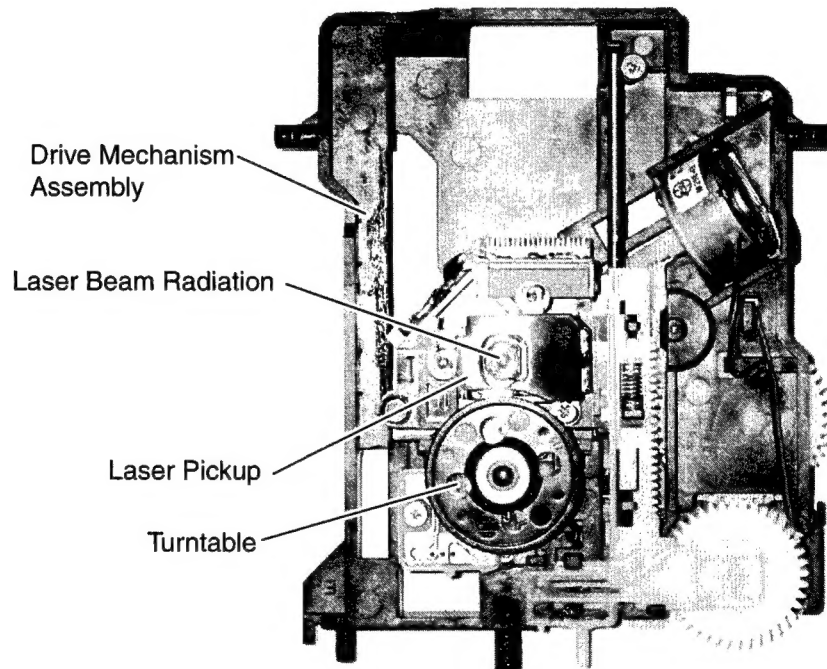
This DVD player uses a pickup that emits a laser beam.



Do not look directly at the laser beam coming from the pickup or allow it to strike against your skin.

The laser beam is emitted from the location shown in the figure. When checking the laser diode, be sure to keep your eyes at least 30 cm away from the pickup lens when the diode is turned on. Do not look directly at the laser beam.

**CAUTION:** Use of controls and adjustments, or doing procedures other than those specified herein, may result in hazardous radiation exposure.




CAUTION - CLASS 1M LASER RADIATION WHEN OPEN. DO NOT VIEW DIRECTLY WITH OPTICAL INSTRUMENTS


**Location: Top of DVD mechanism.**

# IMPORTANT SAFETY PRECAUTIONS

## Product Safety Notice

Some electrical and mechanical parts have special safety-related characteristics which are often not evident from visual inspection, nor can the protection they give necessarily be obtained by replacing them with components rated for higher voltage, wattage, etc. Parts that have special safety characteristics are identified by a  on schematics and in parts lists. Use of a substitute replacement that does not have the same safety characteristics as the recommended replacement part might create shock, fire, and/or other hazards. The Product's Safety is under review continuously and new instructions are issued whenever appropriate. Prior to shipment from the factory, our products are carefully inspected to confirm with the recognized product safety and electrical codes of the countries in which they are to be sold. However, in order to maintain such compliance, it is equally important to implement the following precautions when a set is being serviced.

## Precautions during Servicing

- A. Parts identified by the  symbol are critical for safety. Replace only with part number specified.
- B. In addition to safety, other parts and assemblies are specified for conformance with regulations applying to spurious radiation. These must also be replaced only with specified replacements.  
Examples: RF converters, RF cables, noise blocking capacitors, and noise blocking filters, etc.
- C. Use specified internal wiring. Note especially:
  - 1) Wires covered with PVC tubing
  - 2) Double insulated wires
  - 3) High voltage leads
- D. Use specified insulating materials for hazardous live parts. Note especially:
  - 1) Insulation tape
  - 2) PVC tubing
  - 3) Spacers
  - 4) Insulators for transistors
- E. When replacing AC primary side components (transformers, power cord, etc.), wrap ends of wires securely about the terminals before soldering.
- F. Observe that the wires do not contact heat producing parts (heatsinks, oxide metal film resistors, fusible resistors, etc.).
- G. Check that replaced wires do not contact sharp edges or pointed parts.
- H. When a power cord has been replaced, check that 5 - 6 kg of force in any direction will not loosen it.
- I. Also check areas surrounding repaired locations.
- J. Be careful that foreign objects (screws, solder droplets, etc.) do not remain inside the set.
- K. Crimp type wire connector  
The power transformer uses crimp type connectors which connect the power cord and the primary side of the transformer. When replacing the transformer, follow these steps carefully and precisely to prevent shock hazards.  
Replacement procedure
  - 1) Remove the old connector by cutting the wires at a point close to the connector.  
**Important:** Do not re-use a connector. (Discard it.)
  - 2) Strip about 15 mm of the insulation from the ends of the wires. If the wires are stranded, twist the strands to avoid frayed conductors.
  - 3) Align the lengths of the wires to be connected. Insert the wires fully into the connector.
  - 4) Use a crimping tool to crimp the metal sleeve at its center. Be sure to crimp fully to the complete closure of the tool.
- L. When connecting or disconnecting the internal connectors, first, disconnect the AC plug from the AC outlet.

# Safety Check after Servicing

Examine the area surrounding the repaired location for damage or deterioration. Observe that screws, parts, and wires have been returned to their original positions. Afterwards, do the following tests and confirm the specified values to verify compliance with safety standards.

## 1. Clearance Distance

When replacing primary circuit components, confirm specified clearance distance (d) and (d') between soldered terminals, and between terminals and surrounding metallic parts. (See Fig. 1)

Table 1 : Ratings for selected area

AC Line Voltage	Clearance Distance (d), (d')
220 to 240 V	$\geq 3\text{ mm(d)}$
	$\geq 6\text{ mm(d')}$

**Note:** This table is unofficial and for reference only.  
Be sure to confirm the precise values.

## 2. Leakage Current Test

Confirm the specified (or lower) leakage current between B (earth ground, power cord plug prongs) and externally exposed accessible parts (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.) is lower than or equal to the specified value in the table below.

### Measuring Method (Power ON) :

Insert load Z between B (earth ground, power cord plug prongs) and exposed accessible parts. Use an AC voltmeter to measure across the terminals of load Z. See Fig. 2 and the following table.

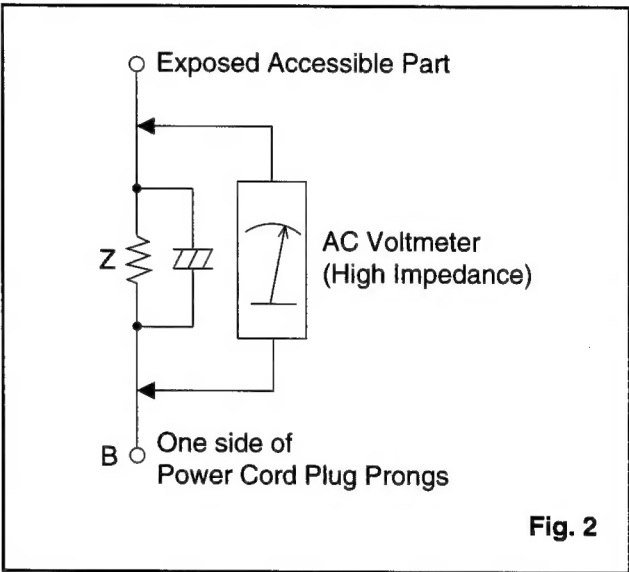
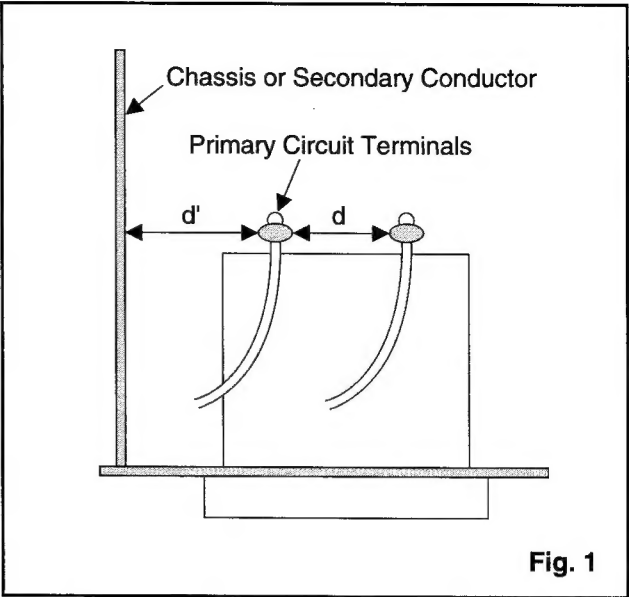


Table 2: Leakage current ratings for selected areas

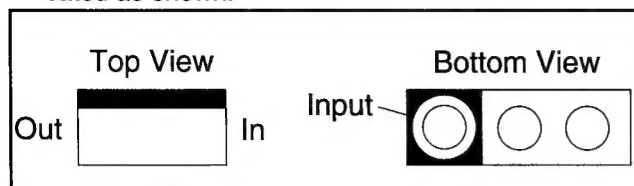
AC Line Voltage	Load Z	Leakage Current (i)	One side of power cord plug prongs (B) to:
220 to 240 V	2k $\Omega$ RES. Connected in parallel	$i \leq 0.7\text{mA AC Peak}$ $i \leq 2\text{mA DC}$	RF or Antenna terminals
	50k $\Omega$ RES. Connected in parallel	$i \leq 0.7\text{mA AC Peak}$ $i \leq 2\text{mA DC}$	A/V Input, Output

**Note:** This table is unofficial and for reference only. Be sure to confirm the precise values.

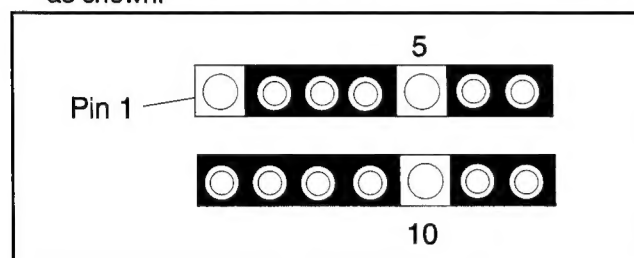
# STANDARD NOTES FOR SERVICING

## Circuit Board Indications

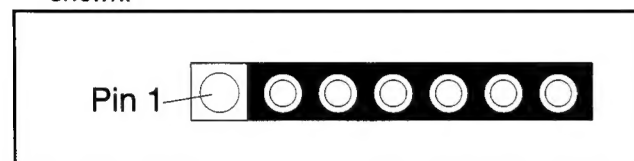
1. The output pin of the 3 pin Regulator ICs is indicated as shown.



2. For other ICs, pin 1 and every fifth pin are indicated as shown.

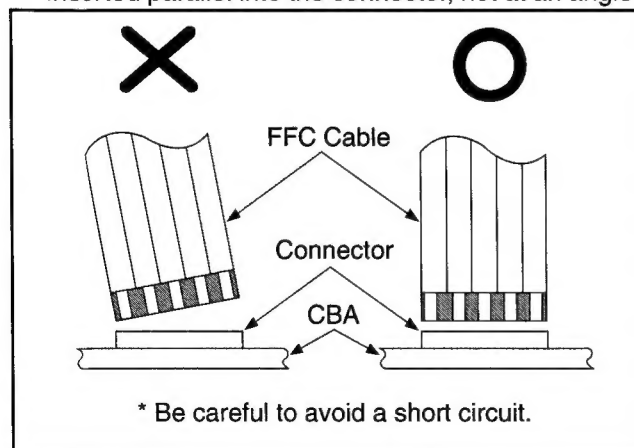


3. The 1st pin of every male connector is indicated as shown.



## Instructions for Connectors

1. When you connect or disconnect the FFC (Flexible Foil Connector) cable, be sure to first disconnect the AC cord.
2. FFC (Flexible Foil Connector) cable should be inserted parallel into the connector, not at an angle.



## Pb (Lead) Free Solder

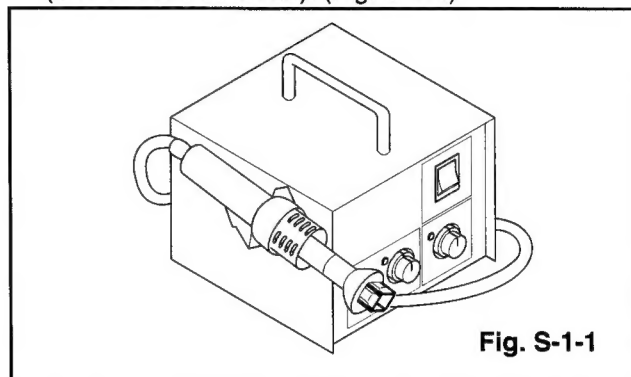
When soldering, be sure to use the Pb free solder.

## How to Remove / Install Flat Pack-IC

### 1. Removal

With Hot-Air Flat Pack-IC Desoldering Machine:.

- (1) Prepare the hot-air flat pack-IC desoldering machine, then apply hot air to the Flat Pack-IC (about 5 to 6 seconds). (Fig. S-1-1)



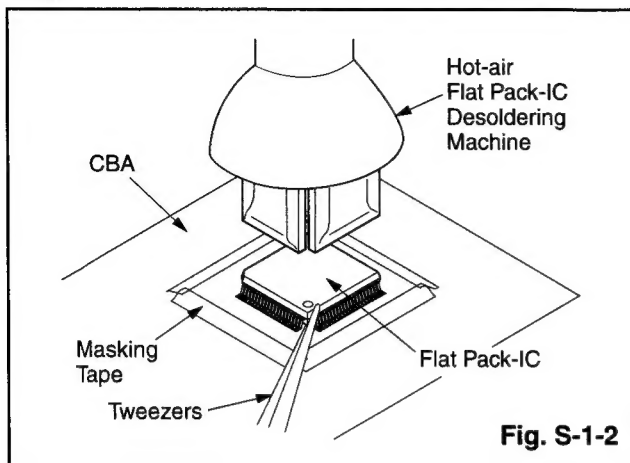
- (2) Remove the flat pack-IC with tweezers while applying the hot air.
- (3) Bottom of the flat pack-IC is fixed with glue to the CBA; when removing entire flat pack-IC, first apply soldering iron to center of the flat pack-IC and heat up. Then remove (glue will be melted). (Fig. S-1-6)
- (4) Release the flat pack-IC from the CBA using tweezers. (Fig. S-1-6)

### Caution:

1. The Flat Pack-IC shape may differ by models. Use an appropriate hot-air flat pack-IC desoldering machine, whose shape matches that of the Flat Pack-IC.
2. Do not supply hot air to the chip parts around the flat pack-IC for over 6 seconds because damage to the chip parts may occur. Put masking tape around the flat pack-IC to protect other parts from damage. (Fig. S-1-2)

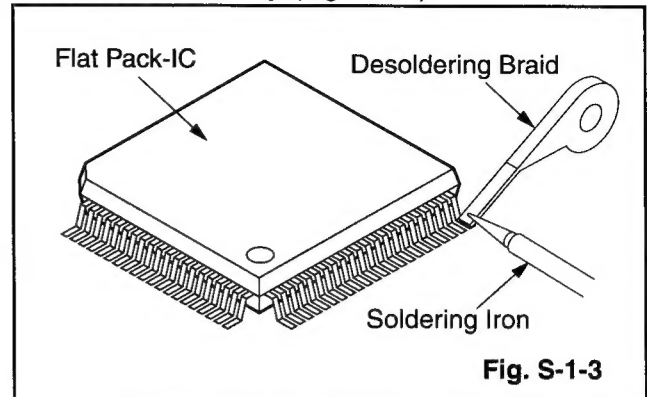


3. The flat pack-IC on the CBA is affixed with glue, so be careful not to break or damage the foil of each pin or the solder lands under the IC when removing it.

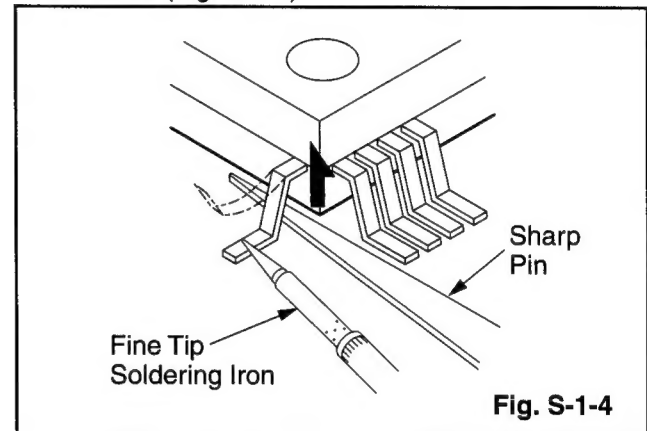


#### With Soldering Iron:

- (1) Using desoldering braid, remove the solder from all pins of the flat pack-IC. When you use solder flux which is applied to all pins of the flat pack-IC, you can remove it easily. (Fig. S-1-3)



- (2) Lift each lead of the flat pack-IC upward one by one, using a sharp pin or wire to which solder will not adhere (iron wire). When heating the pins, use a fine tip soldering iron or a hot air desoldering machine. (Fig. S-1-4)



- (3) Bottom of the flat pack-IC is fixed with glue to the CBA; when removing entire flat pack-IC, first apply soldering iron to center of the flat pack-IC and heat up. Then remove (glue will be melted). (Fig. S-1-6)
- (4) Release the flat pack-IC from the CBA using tweezers. (Fig. S-1-6)

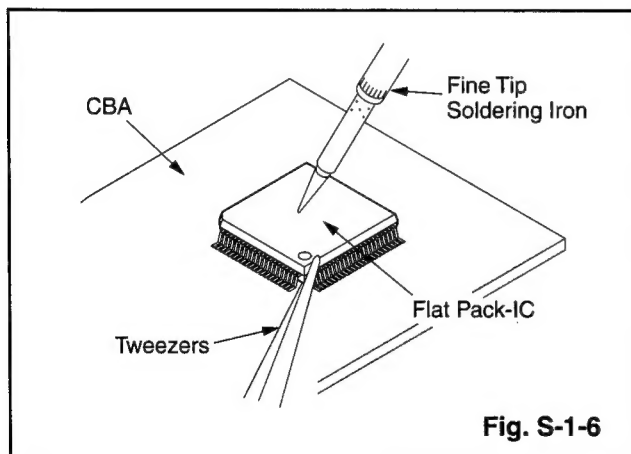
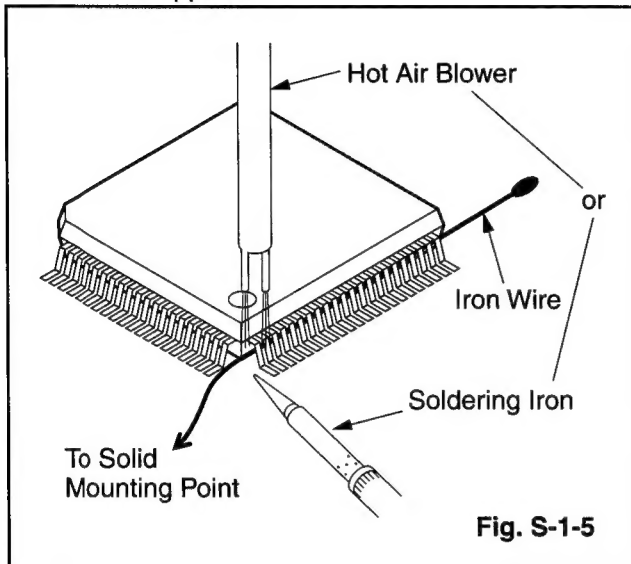
#### With Iron Wire:

- (1) Using desoldering braid, remove the solder from all pins of the flat pack-IC. When you use solder flux which is applied to all pins of the flat pack-IC, you can remove it easily. (Fig. S-1-3)
- (2) Affix the wire to a workbench or solid mounting point, as shown in Fig. S-1-5.
- (3) While heating the pins using a fine tip soldering iron or hot air blower, pull up the wire as the solder melts so as to lift the IC leads from the CBA contact pads as shown in Fig. S-1-5

- (4) Bottom of the flat pack-IC is fixed with glue to the CBA; when removing entire flat pack-IC, first apply soldering iron to center of the flat pack-IC and heat up. Then remove (glue will be melted). (Fig. S-1-6)
- (5) Release the flat pack-IC from the CBA using tweezers. (Fig. S-1-6)

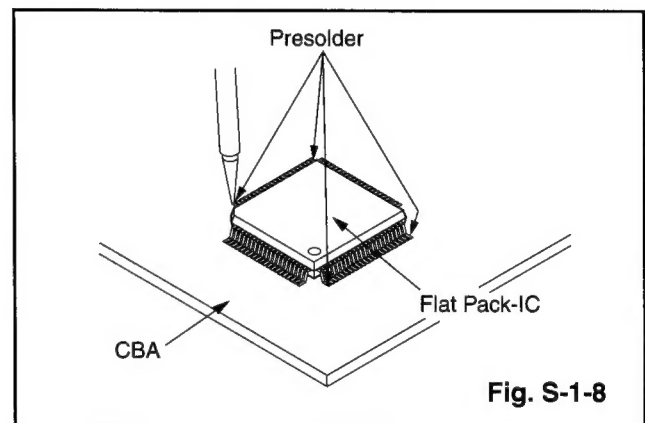
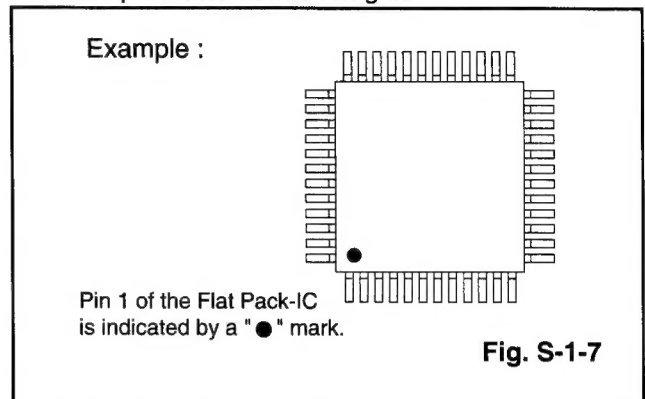
**Note:**

When using a soldering iron, care must be taken to ensure that the flat pack-IC is not being held by glue. When the flat pack-IC is removed from the CBA, handle it gently because it may be damaged if force is applied.



## 2. Installation

- (1) Using desoldering braid, remove the solder from the foil of each pin of the flat pack-IC on the CBA so you can install a replacement flat pack-IC more easily.
- (2) The "●" mark on the flat pack-IC indicates pin 1. (See Fig. S-1-7.) Be sure this mark matches the 1 on the PCB when positioning for installation. Then presolder the four corners of the flat pack-IC. (See Fig. S-1-8.)
- (3) Solder all pins of the flat pack-IC. Be sure that none of the pins have solder bridges.



## Instructions for Handling Semi-conductors

Electrostatic breakdown of the semi-conductors may occur due to a potential difference caused by electrostatic charge during unpacking or repair work.

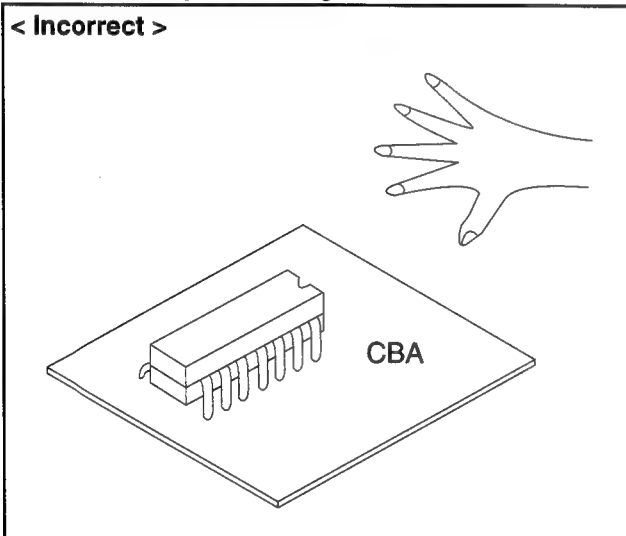
### 1. Ground for Human Body

Be sure to wear a grounding band ( $1M\Omega$ ) that is properly grounded to remove any static electricity that may be charged on the body.

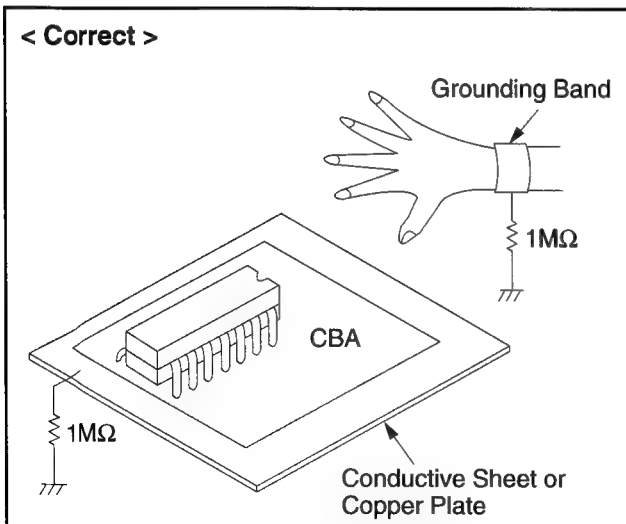
### 2. Ground for Workbench

- (1) Be sure to place a conductive sheet or copper plate with proper grounding ( $1M\Omega$ ) on the workbench or other surface, where the semi-conductors are to be placed. Because the static electricity charge on clothing will not escape through the body grounding band, be careful to avoid contacting semi-conductors with your clothing.

< Incorrect >



< Correct >



# PREPARATION FOR SERVICING

## How to Enter the Service Mode

### About Optical Sensors

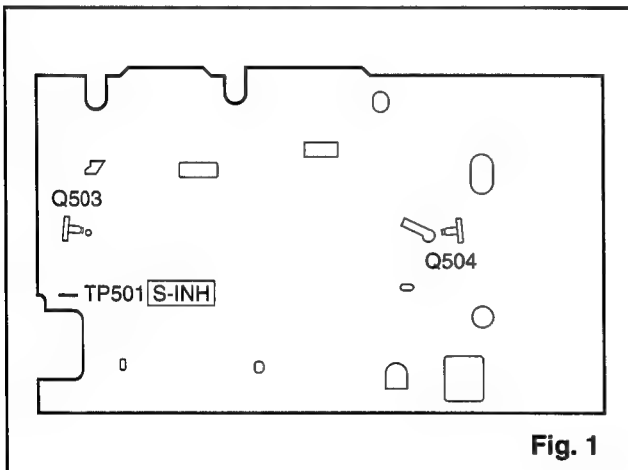
#### **Caution:**

An optical sensor system is used for the Tape Start and End Sensors on this equipment. Carefully read and follow the instructions below. Otherwise the unit may operate erratically.

#### **What to do for preparation**

Insert a tape into the Deck Mechanism Assembly and press the PLAY button. The tape will be loaded into the Deck Mechanism Assembly. Make sure the power is on, connect TP501 (S-INH) to GND. This will stop the function of Tape Start Sensor, Tape End Sensor and Reel Sensors. (If these TP's are connected before plugging in the unit, the function of the sensors will stay valid.) See Fig. 1.

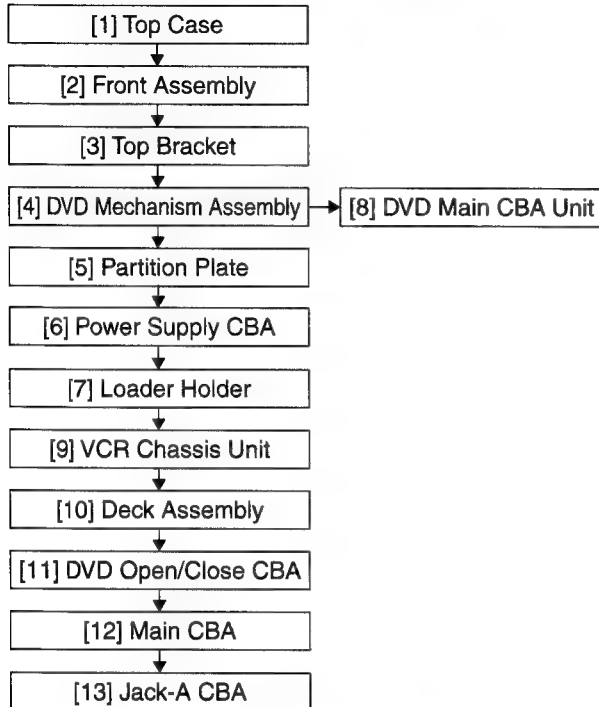
**Note:** Because the Tape End Sensors are inactive, do not run a tape all the way to the start or the end of the tape to avoid tape damage.



# CABINET DISASSEMBLY INSTRUCTIONS

## 1. Disassembly Flowchart

This flowchart indicates the disassembly steps to gain access to item(s) to be serviced. When reassembling, follow the steps in reverse order. Bend, route, and dress the cables as they were originally.



## 2. Disassembly Method

ID/ LOC. No.	PART	REMOVAL		
		Fig. No.	REMOVE/*UNHOOK/ UNLOCK/RELEASE/ UNPLUG/DESOLDER	Note
[1]	Top Case	D1	8(S-1)	-
[2]	Front Assembly	D2	*3(L-1), *3(L-2)	1 1-1 1-2
[3]	Top Bracket	D2	3(S-2)	-
[4]	DVD Mechanism Assembly	D3	4(S-3), *CN401, *CN601	-
[5]	Partition Plate	D3	(S-4)	-
[6]	Power Supply CBA	D3	2(S-5), CN501	-
[7]	Loader Holder	D3	2(S-6)	-
[8]	DVD Main CBA Unit	D4	2(S-7), *CN201, *CN301	2 2-1 2-2 3

ID/ LOC. No.	PART	REMOVAL		
		Fig. No.	REMOVE/*UNHOOK/ UNLOCK/RELEASE/ UNPLUG/DESOLDER	Note
[9]	VCR Chassis Unit	D5	5(S-8), 2(S-9), (S-10), (L-3)	-
[10]	Deck Assembly	D6	Desolder, 2(S-11), (S-12)	4,5
[11]	DVD Open/Close CBA	D6	Desolder	-
[12]	Main CBA	D6	-----	-
[13]	Jack-A CBA	D6	Desolder, 6(S-13)	-
		↓	↓	↓
		(1)	(2)	(3)
				(4)
				(5)

### Note:

(1): Identification (location) No. of parts in the figures

(2): Name of the part

(3): Figure Number for reference

(4): Identification of parts to be removed, unhooked, unlocked, released, unplugged, unclamped, or desoldered.

P=Spring, L=Locking Tab, S=Screw,

CN=Connector

\*=Unhook, Unlock, Release, Unplug, or Desolder

e.g. 2(S-2) = two Screws (S-2),

2(L-2) = two Locking Tabs (L-2)

(5): Refer to "Reference Notes."

## Reference Notes

**CAUTION 1:** Locking Tabs (L-1) and (L-2) are fragile. Be careful not to break them.

1-1. Release three Locking Tabs (L-1).

1-2. Release three Locking Tabs (L-2), then remove the Front Assembly.

**CAUTION 2:** Electrostatic breakdown of the laser diode in the optical system block may occur as a potential difference caused by electrostatic charge accumulated on cloth, human body etc., during unpacking or repair work.

To avoid damage of pickup follow next procedures.

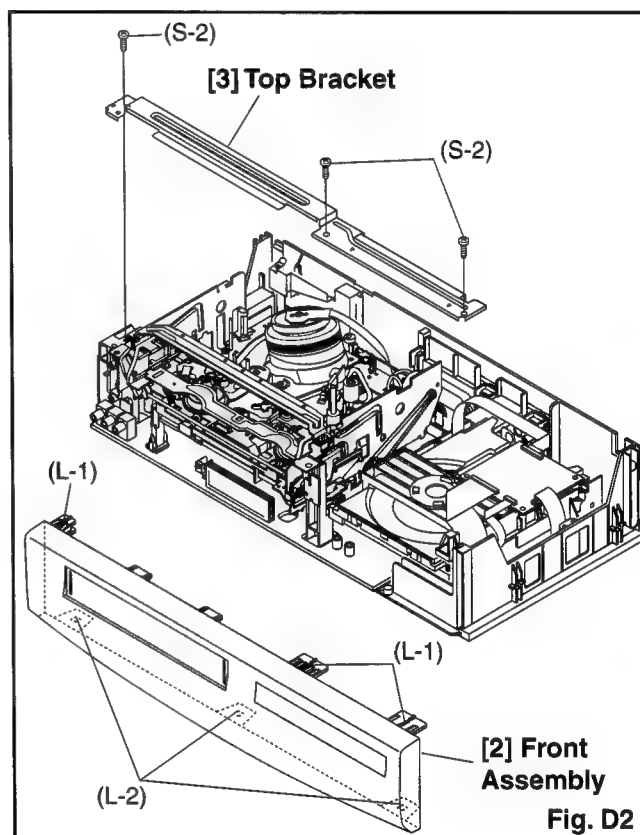
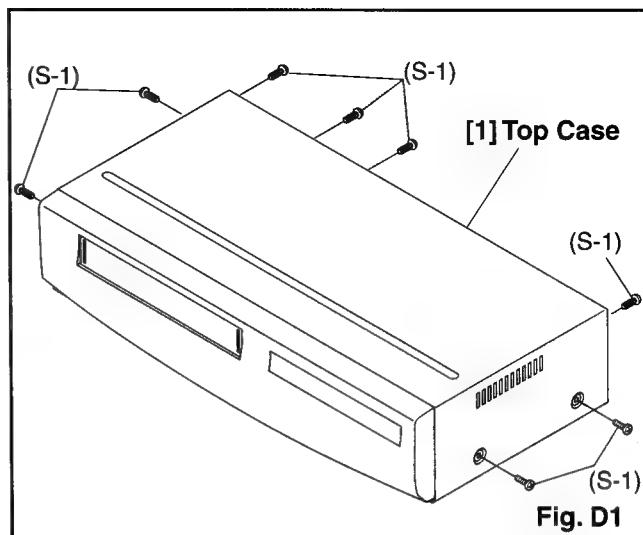
2-1. Disconnect Connector (CN301). Remove a Screw (S-7) and lift the DVD Main CBA Unit. (Fig. D4)

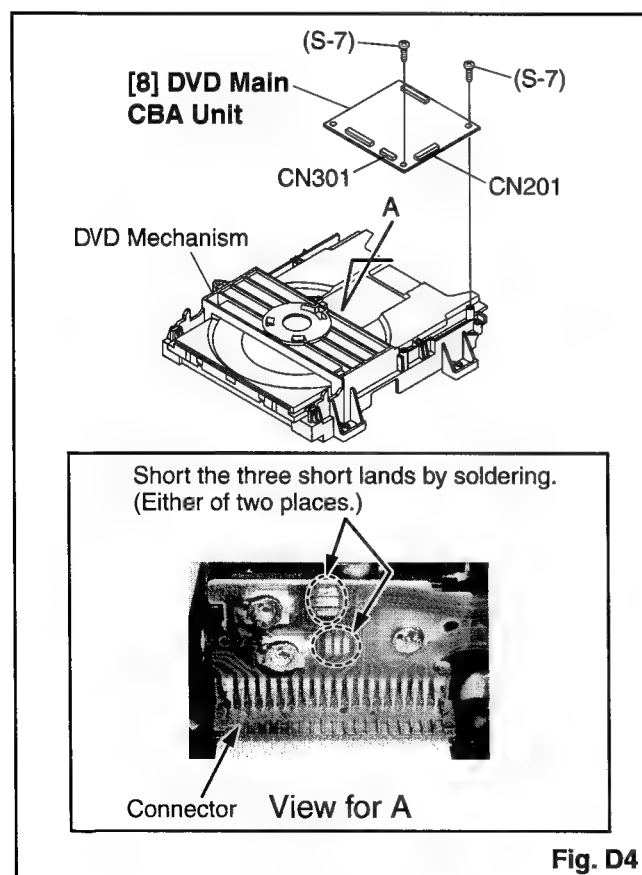
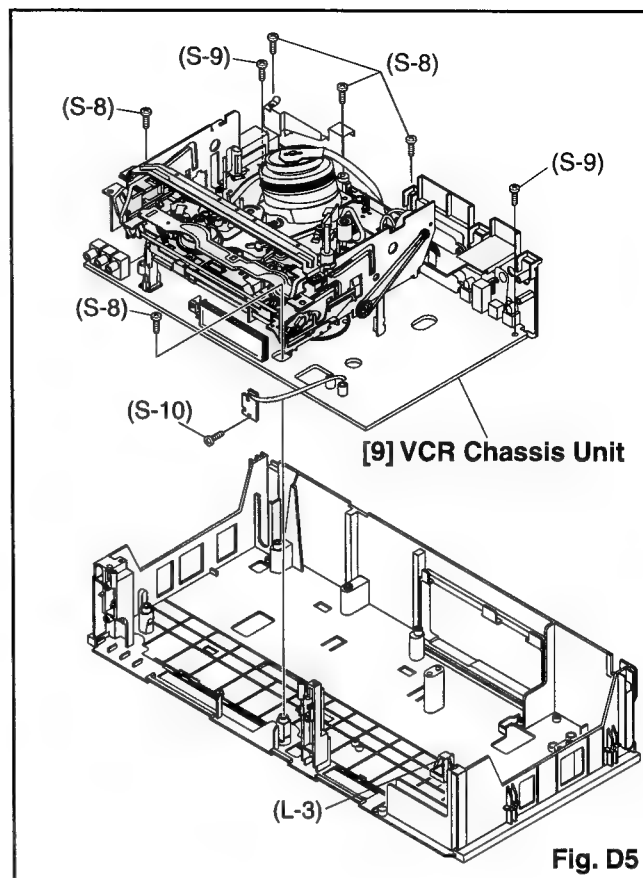
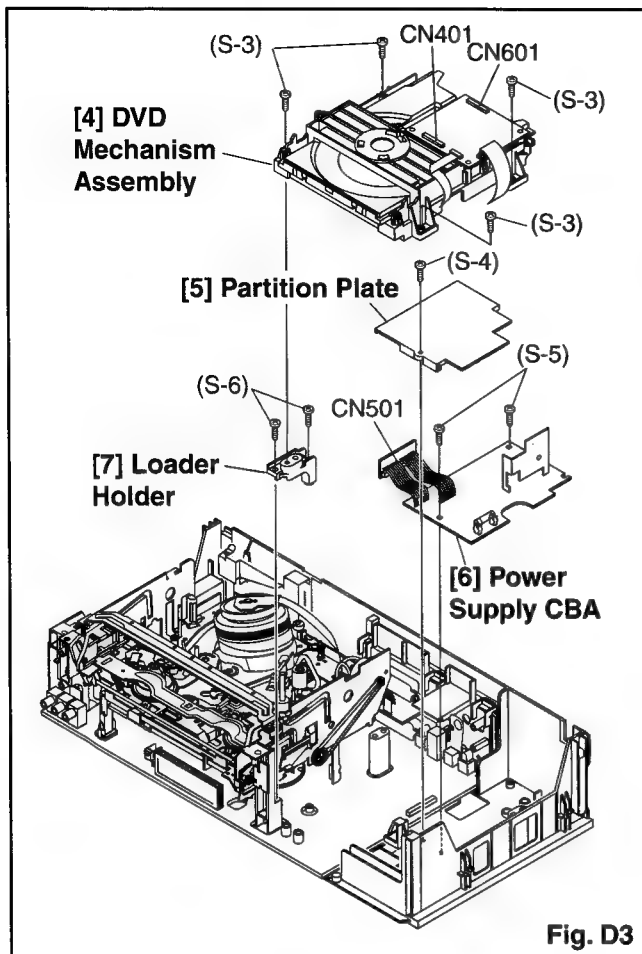
2-2. Short the three short lands of FPC cable with solder before removing the FFC cable (CN201) from it. If you disconnect the FFC cable (CN201), the laser diode of pickup will be destroyed. (Fig. D4)

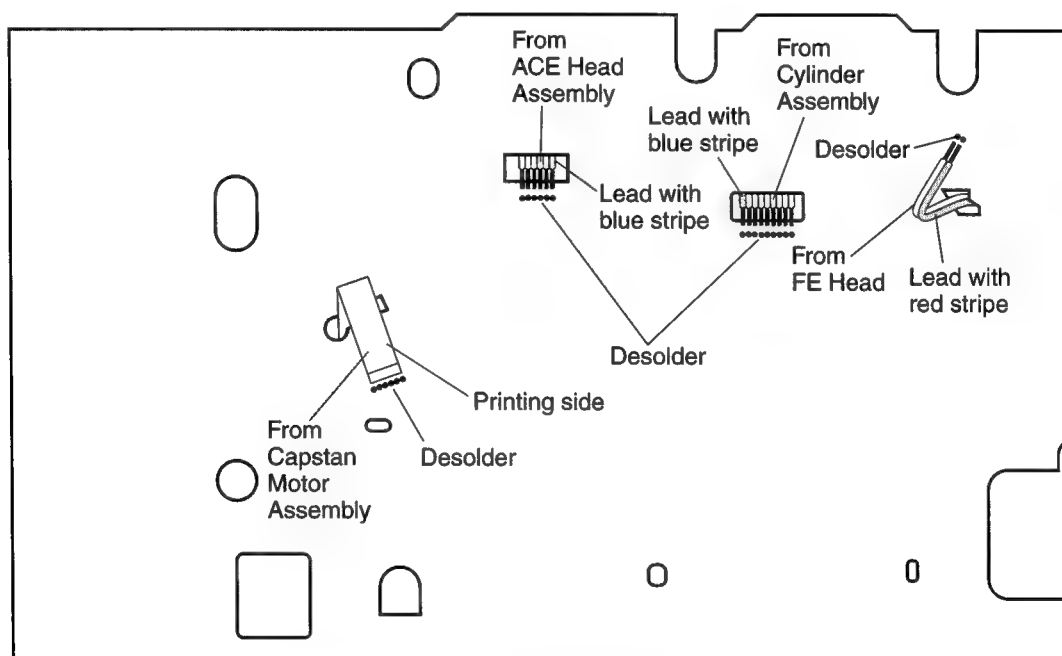
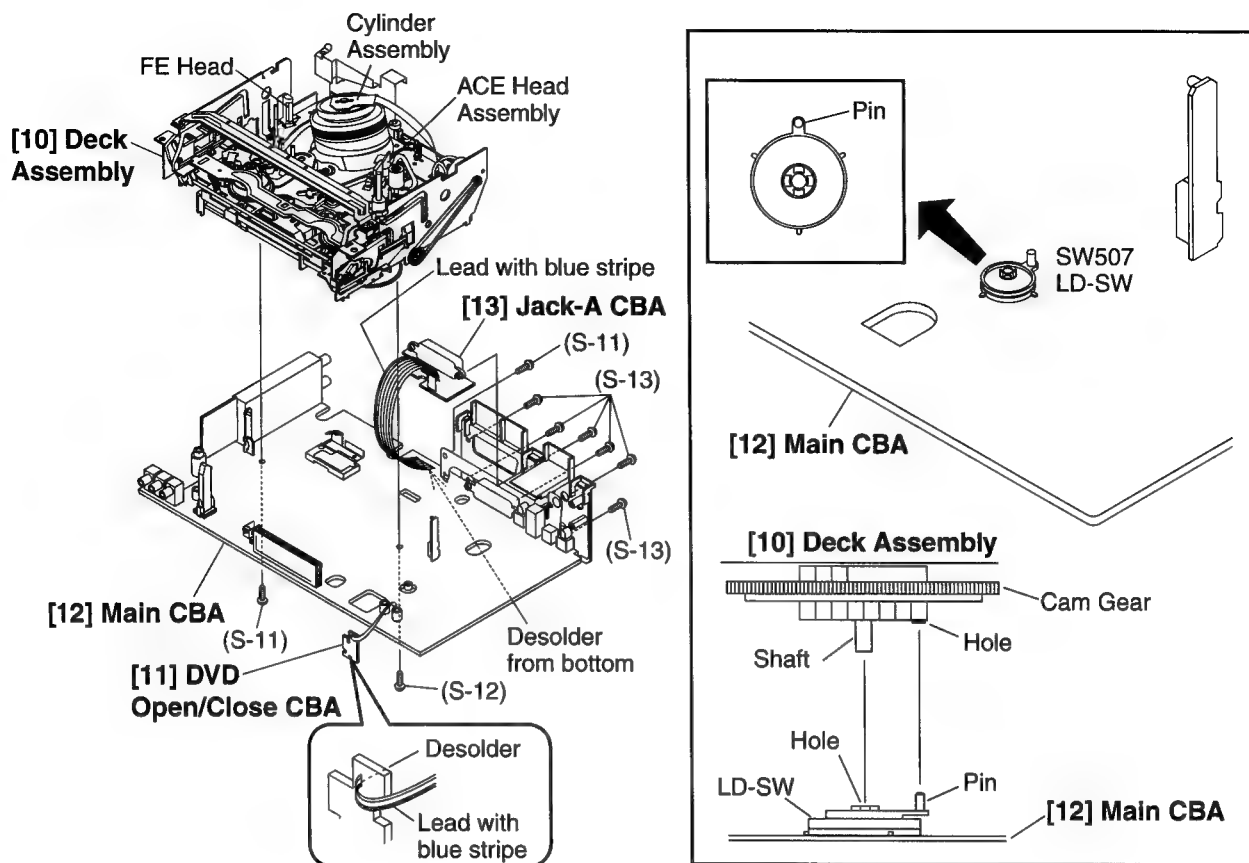
**CAUTION 3:** When reassembling, confirm the FFC cable (CN201) is connected completely. Then remove the solder from the three short lands of FPC cable. (Fig. D4)

4. When reassembling, solder wire jumpers as shown in Fig. D6.

5. Before installing the Deck Assembly, be sure to place the pin of LD-SW on Main CBA as shown in Fig. D6. Then, install the Deck Assembly while aligning the hole of Cam Gear with the pin of LD-SW, the shaft of Cam Gear with the hole of LD-SW as shown in Fig. D6.







#### BOTTOM VIEW

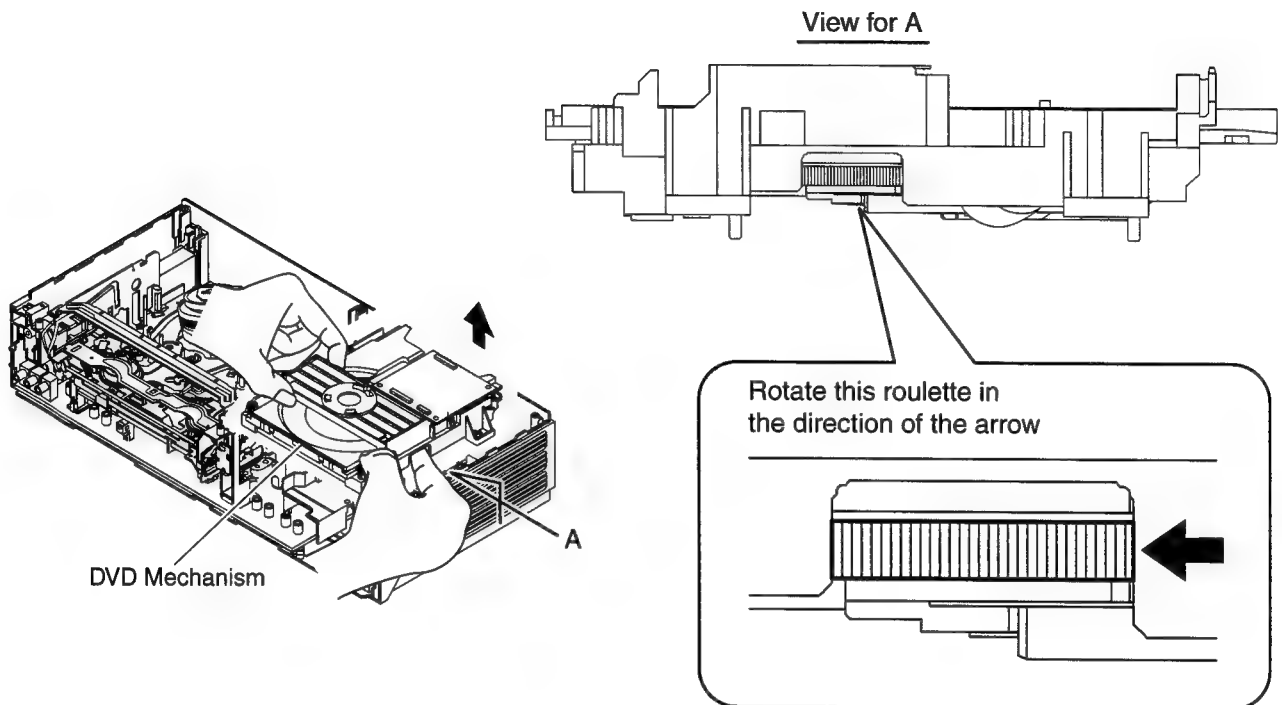
Lead connections of Deck Assembly and Main CBA

Fig. D6



## HOW TO EJECT MANUALLY

1. Remove the Top Case, Front Assembly and Top Bracket.
2. Remove four Screws (S-3) in Fig. D3. Do not disconnect connectors.
3. While lifting up the DVD Mechanism, rotate the roulette in the direction of the arrow as shown below.
4. Pull the tray slowly manually.



# ELECTRICAL ADJUSTMENT INSTRUCTIONS

**General Note:** "CBA" is an abbreviation for "Circuit Board Assembly."

**NOTE:**

1. Electrical adjustments are required after replacing circuit components and certain mechanical parts. It is important to do these adjustments only after all repairs and replacements have been completed. Also, do not attempt these adjustments unless the proper equipment is available.
2. To perform these alignment / confirmation procedures, make sure that the tracking control is set in the center position: Press either "CHANNEL ▼" or "CHANNEL ▲" button on the front panel first, then the "PLAY" button on the front panel.

## Test Equipment Required

1. Oscilloscope: Dual-trace with 10:1 probe,  
V-Range: 0.001~50V/Div.,  
F-Range: DC~AC-20MHz
2. Alignment Tape (FL6A)

## Head Switching Position Adjustment

**Purpose:**

To determine the Head Switching position during playback.

**Symptom of Misadjustment:**

May cause Head Switching noise or vertical jitter in the picture.

Test point	Adj.Point	Mode	Input
TP751(V-OUT) TP504(RF-SW) GND	VR501 (Switching Point) (MAIN CBA)	PLAY (SP)	-----
Tape	Measurement Equipment	Spec.	
FL6A	Oscilloscope	6.5H±1H (416µs±64µs)	

Connections of Measurement Equipment			
--------------------------------------	--	--	--

Main CBA

TP751

GND

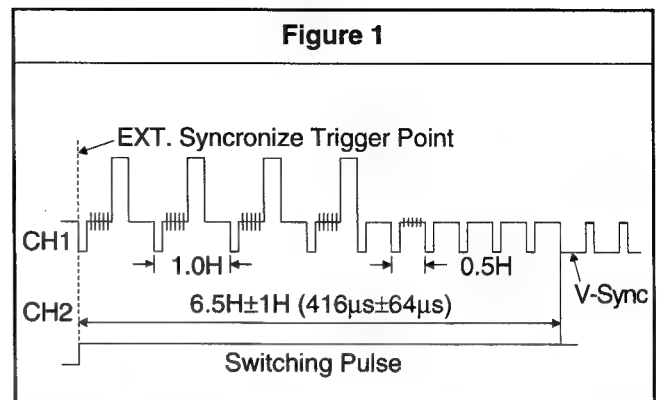
TP504

Oscilloscope

CH1

CH2

Trig. (+)



**Reference Notes:**

Playback the Alignment tape and adjust VR501 so that the V-sync front edge of the CH1 video output waveform is at the 6.5H±1H (416µs±64µs) delayed position from the rising edge of the CH2 head switching pulse waveform.

# HOW TO INITIALIZE THE DVD PLAYER & VCR

To put the program back at the factory-default, initialize the DVD player & VCR as the following procedure.

## < DVD Section >

1. Press [DVD], [1], [2], [3], [4], and [DISPLAY] buttons on the remote control unit in that order. Fig. a appears on the screen.

"\*\*\*\*\*" differ depending on the models.

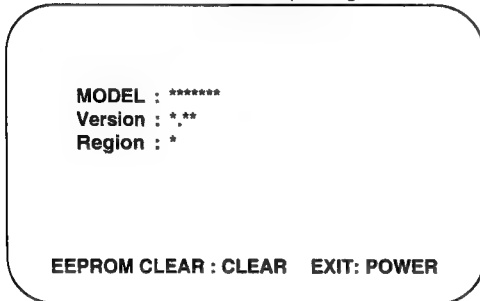


Fig. a

2. Press [CLEAR] button on the remote control unit. Fig. b appears on the screen.

"\*\*\*\*\*" differ depending on the models.

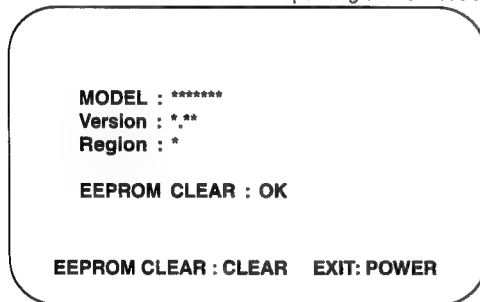


Fig. b

When "OK" appears on the screen, the factory default will be set.

3. To exit this mode, press [FUNCTION] button.

# FIRMWARE RENEWAL MODE

1. Turn the power on and remove the disc on the tray.
2. To put the DVD player into version up mode, press [DVD], [9], [8], [7], [6], and [SEARCH MODE] buttons on the remote control unit in that order. The tray will open automatically. Fig. a appears on the screen and Fig. b appears on the VFD.

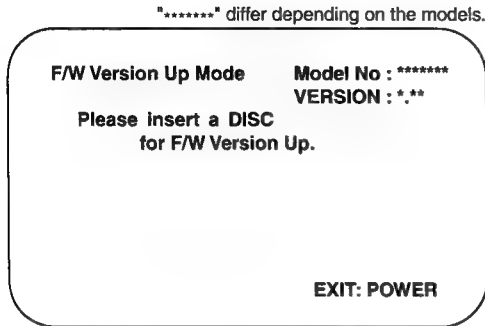


Fig. a Version Up Mode Screen

bE-UP

Fig. b VFD in Version Up Mode

The DVD player can also enter the version up mode with the tray open. In this case, Fig. a will be shown on the screen while the tray is open.

3. Load the disc for version up.
4. The DVD player enters the F/W version up mode automatically. Fig. c appears on the screen and Fig. d appears on the VFD. If you enter the F/W for different models, "Disc Error" will appear on the screen, then the tray will open automatically.

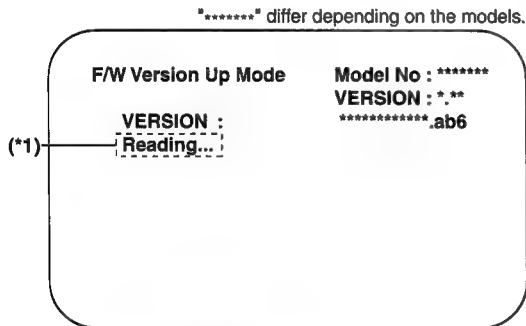


Fig. c Programming Mode Screen

100

Fig. d VFD in Programming Mode (Example)

The appearance shown in (\*1) of Fig. c is described as follows:

No.	Appearance	State
1	Reading...	Sending files into the memory
2	Erasing...	Erasing previous version data
3	Programming...	Writing new version data

5. After programming is finished, the tray opens automatically. Fig. e appears on the screen and the checksum in (\*2) of Fig. e appears on the VFD (Fig. f).

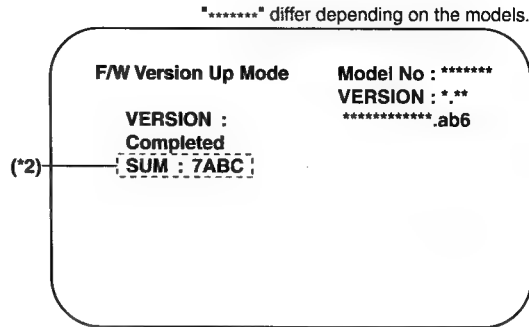


Fig. e Completed Program Mode Screen

7ABC

Fig. f VFD upon Finishing the Programming Mode (Example)

At this time, no button is available.

6. Remove the disc on the tray.
7. Unplug the AC cord from the AC outlet. Then plug it again.
8. Turn the power on by pressing the [FUNCTION] button and the tray will close.
9. Press [1], [2], [3], [4], and [DISPLAY] buttons on the remote control unit in that order. Fig. g appears on the screen.

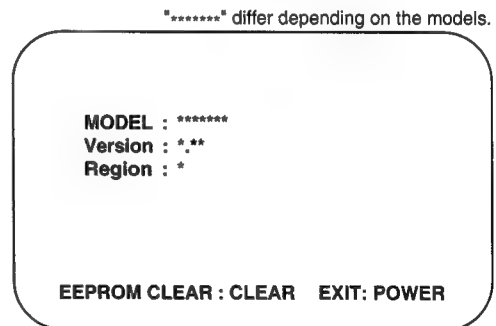


Fig. g

10. Press [CLEAR] button on the remote control unit.  
Fig. h appears on the screen.

"\*\*\*\*\*" differ depending on the models.

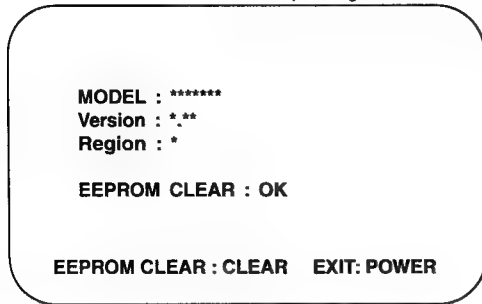


Fig. h

When "OK" appears on the screen, the factory default will be set. Then the firmware renewal mode is complete.

11. To exit this mode, press [FUNCTION] button.

# FUNCTION INDICATOR SYMBOLS

## Note:

If a mechanical malfunction occurs, the power is turned off. When the power comes on again after that by pressing [FUNCTION] button, an error message is displayed on the TV screen for 5 seconds.

MODE	INDICATOR ACTIVE
When reel or capstan mechanism is not functioning correctly	"▲ R" is displayed on a TV screen. (Refer to Fig. 1.)
When tape loading mechanism is not functioning correctly	"▲ T" is displayed on a TV screen. (Refer to Fig. 2.)
When cassette loading mechanism is not functioning correctly	"▲ C" is displayed on a TV screen. (Refer to Fig. 3.)
When the drum is not working properly	"▲ D" is displayed on a TV screen. (Refer to Fig. 4.)
P-ON Power safety detection	"▲ P" is displayed on a TV screen. (Refer to Fig. 5.)

## TV screen

When reel or capstan mechanism is not functioning correctly

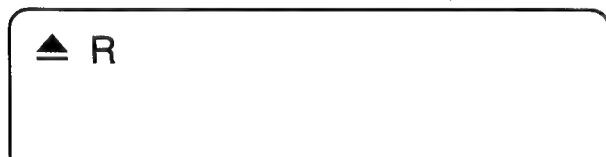


Fig. 1

When the drum is not working properly



Fig. 4

When tape loading mechanism is not functioning correctly

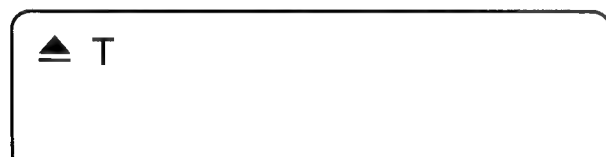


Fig. 2

P-ON Power safety detection



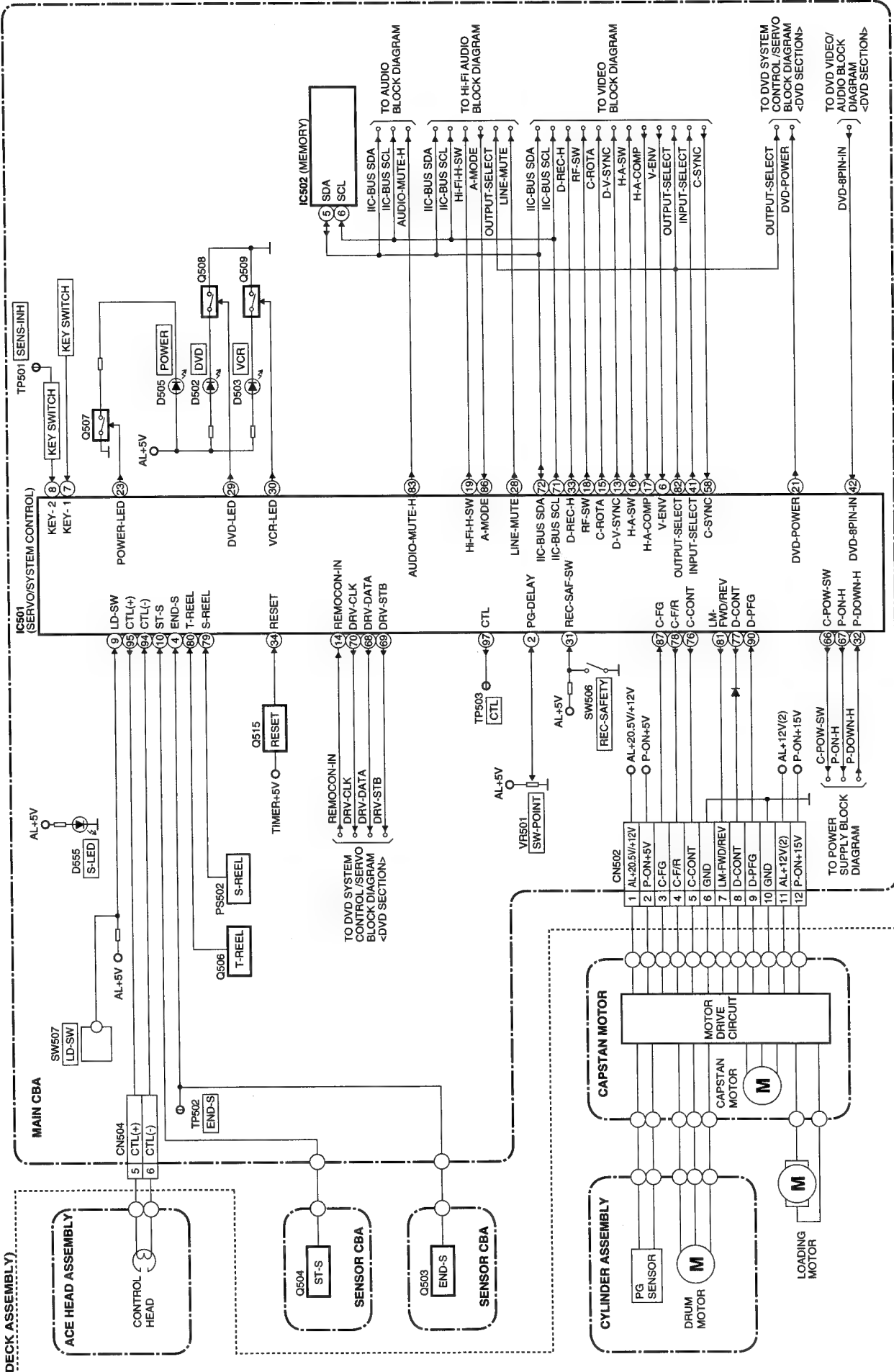
Fig. 5

When cassette loading mechanism is not functioning correctly

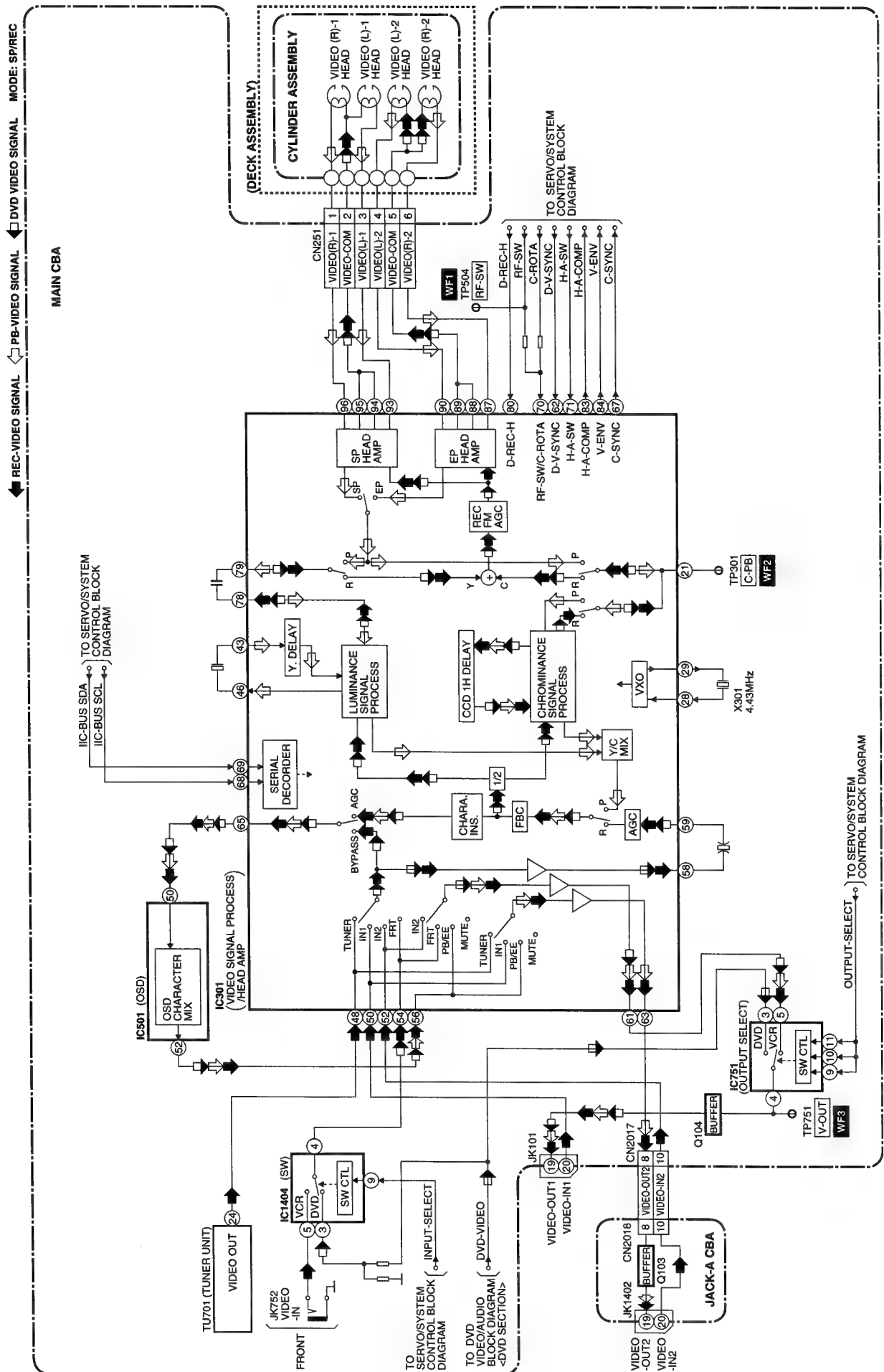


Fig. 3

## Servo / System Control Block Diagram

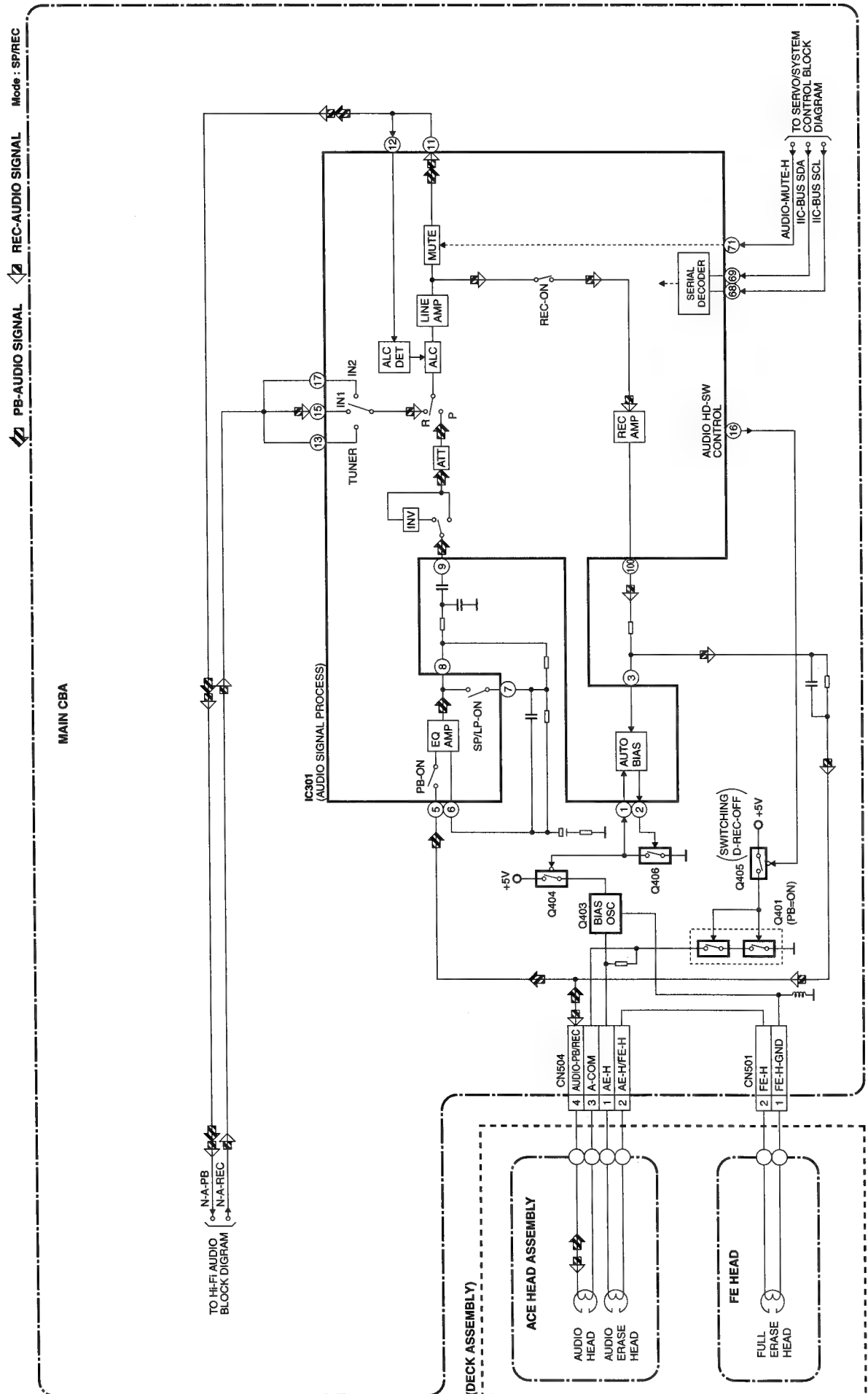


## Video Block Diagram

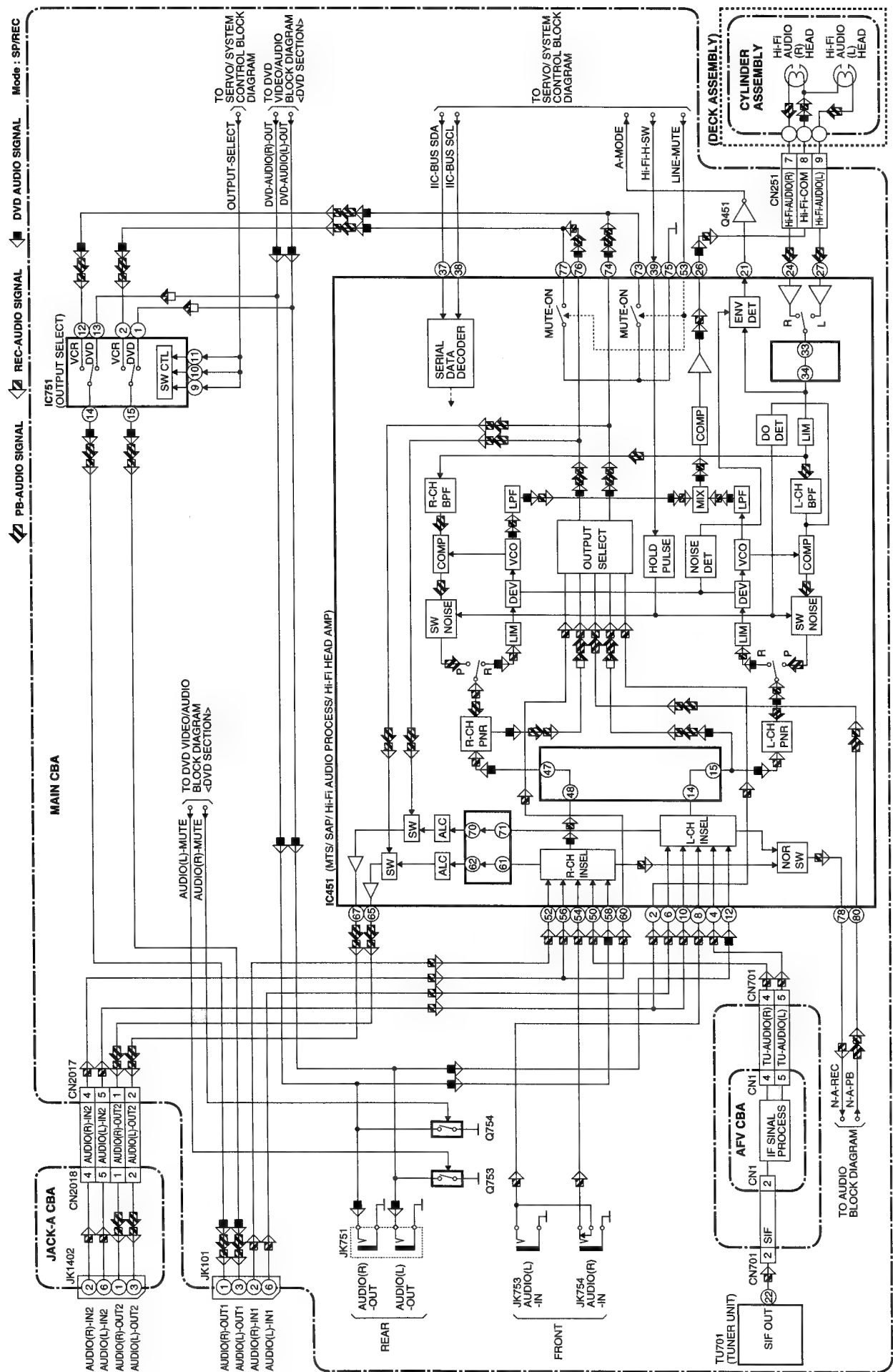




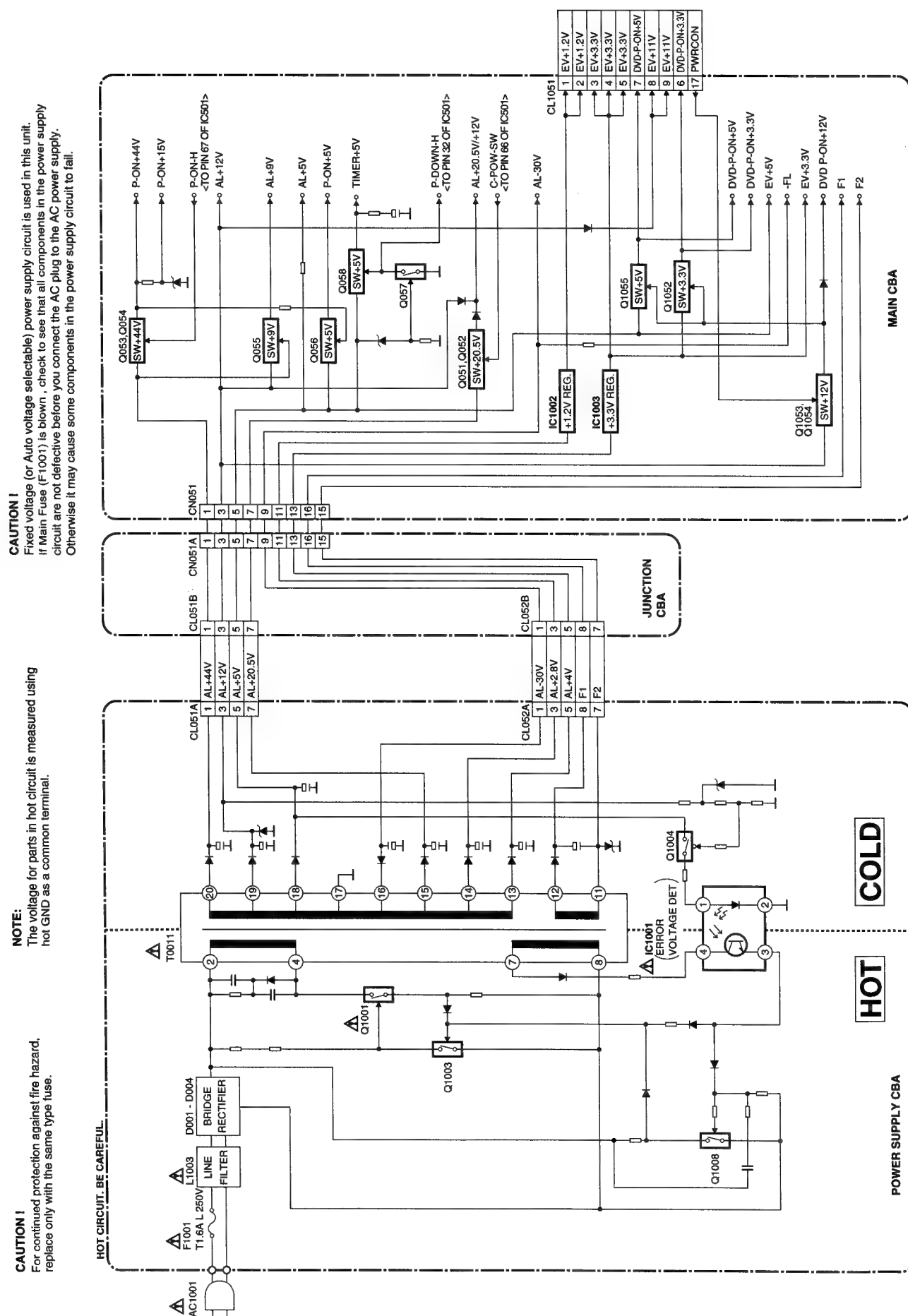
# Audio Block Diagram



# Hi-Fi Audio Block Diagram

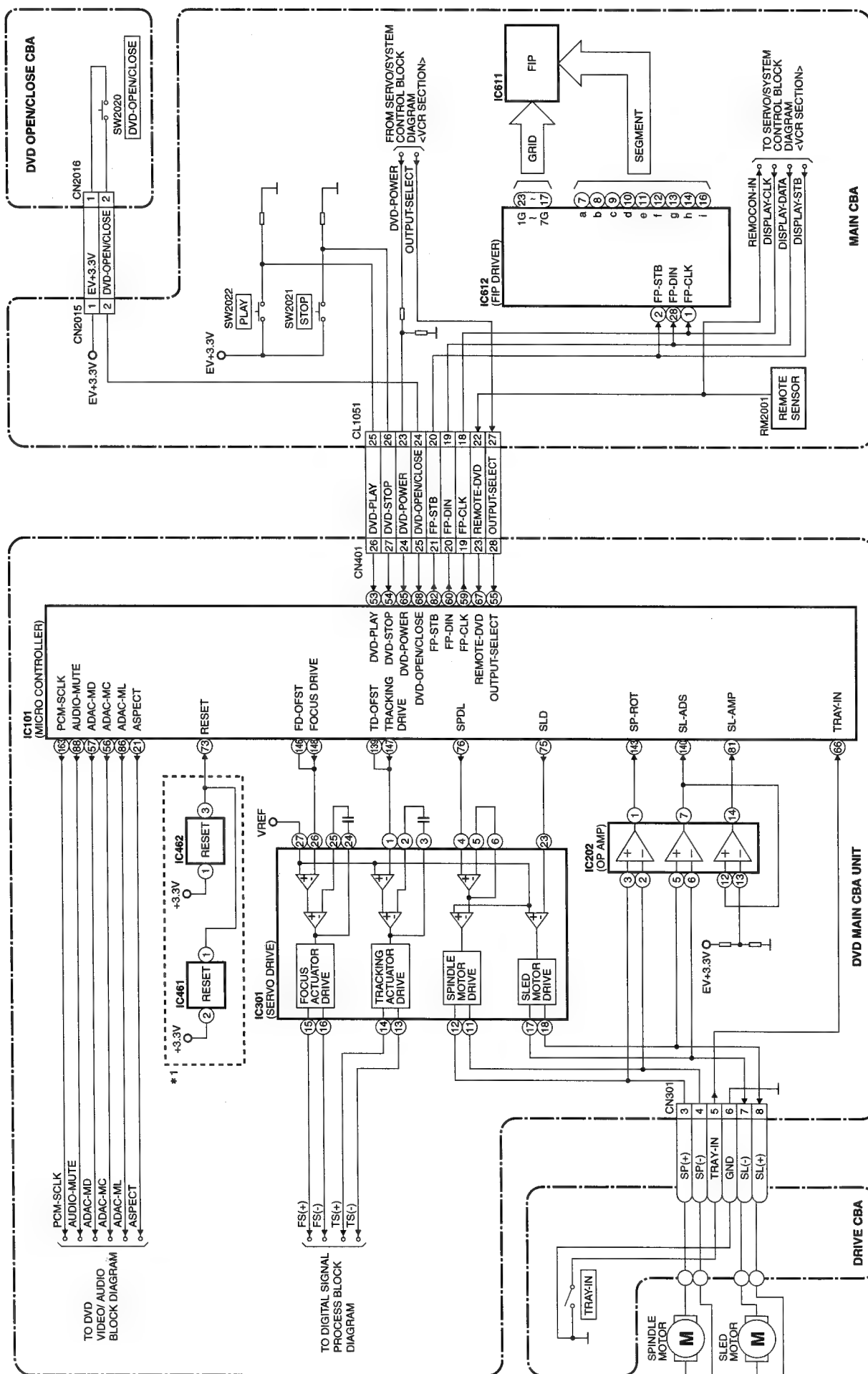


## Power Supply Block Diagram



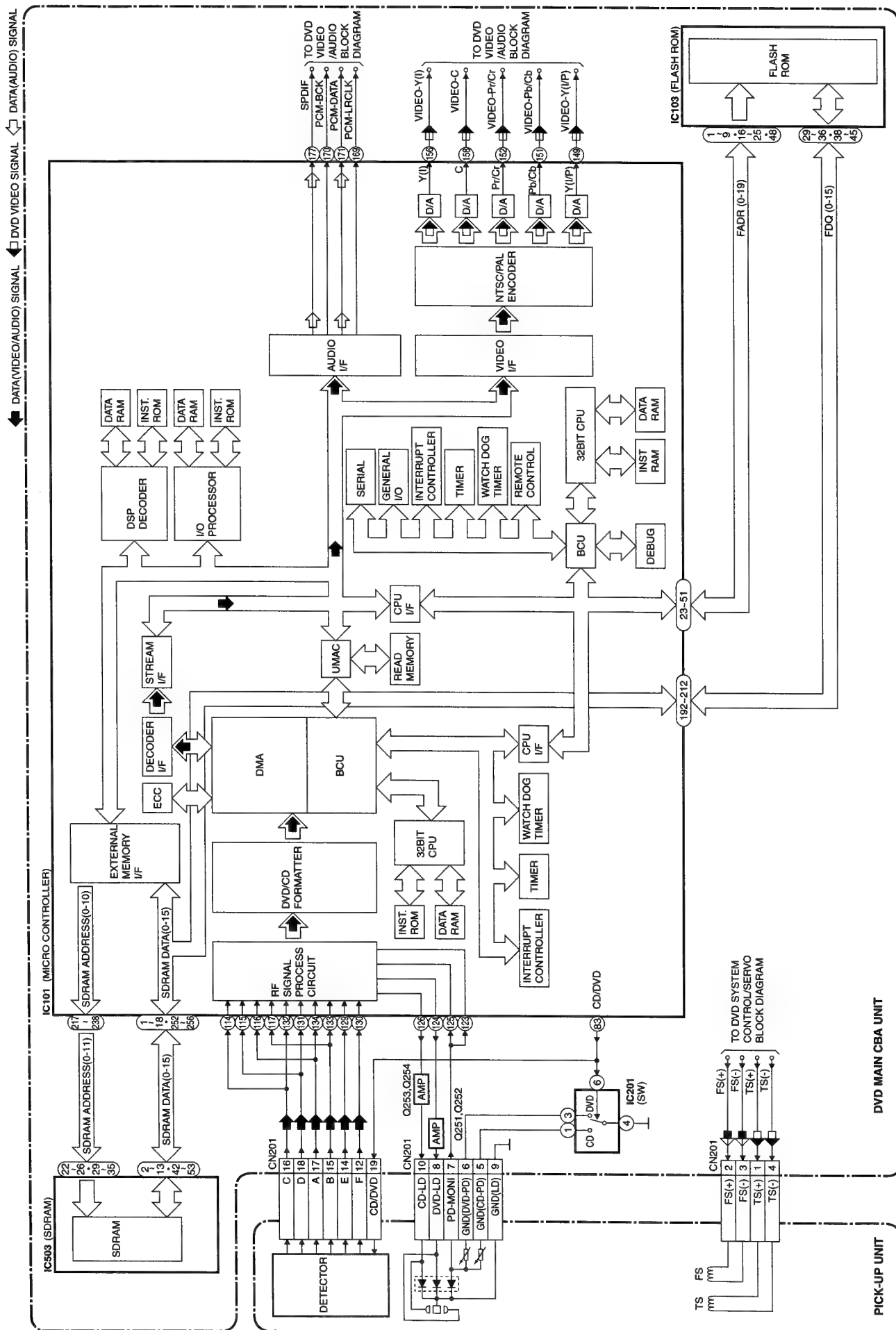
## BLOCK DIAGRAMS <DVD SECTION>

## DVD System Control / Servo Block Diagram

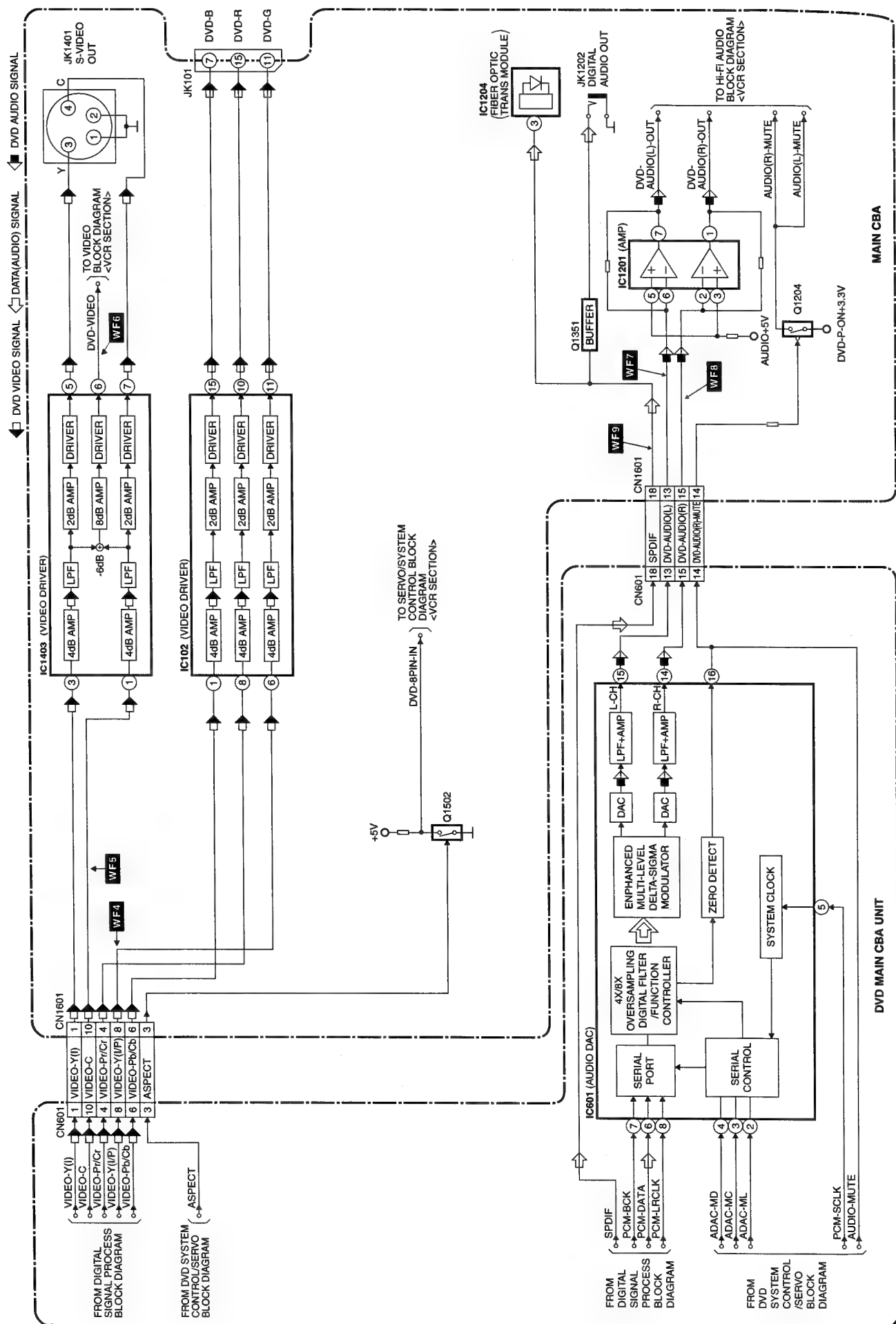


**#1 NOTE:**  
Either IC461 or IC462 is used for DVD MAIN CBA UNIT.

# Digital Signal Process Block Diagram



DVD Video / Audio Block Diagram



# SCHEMATIC DIAGRAMS / CBA'S AND TEST POINTS

## Standard Notes

### WARNING

Many electrical and mechanical parts in this chassis have special characteristics. These characteristics often pass unnoticed and the protection afforded by them cannot necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts that have these special safety characteristics are identified in this manual and its supplements; electrical components having such features are identified by the mark " ⚠ " in the schematic diagram and the parts list. Before replacing any of these components, read the parts list in this manual carefully. The use of substitute replacement parts that do not have the same safety characteristics as specified in the parts list may create shock, fire, or other hazards.

### Notes:

1. Do not use the part number shown on these drawings for ordering. The correct part number is shown in the parts list, and may be slightly different or amended since these drawings were prepared.
2. All resistance values are indicated in ohms ( $K=10^3$ ,  $M=10^6$ ).
3. Resistor wattages are 1/4W or 1/6W unless otherwise specified.
4. All capacitance values are indicated in  $\mu F$  ( $P=10^{-6} \mu F$ ).
5. All voltages are DC voltages unless otherwise specified.
6. Electrical parts such as capacitors, connectors, diodes, IC's, transistors, resistors, switches, and fuses are identified by four digits. The first two digits are not shown for each component. In each block of the diagram, there is a note such as shown below to indicate these abbreviated two digits.

## LIST OF CAUTION, NOTES, AND SYMBOLS USED IN THE SCHEMATIC DIAGRAMS ON THE FOLLOWING PAGES:

### 1. CAUTION:

FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH THE SAME TYPE FUSE.

### 2. CAUTION:

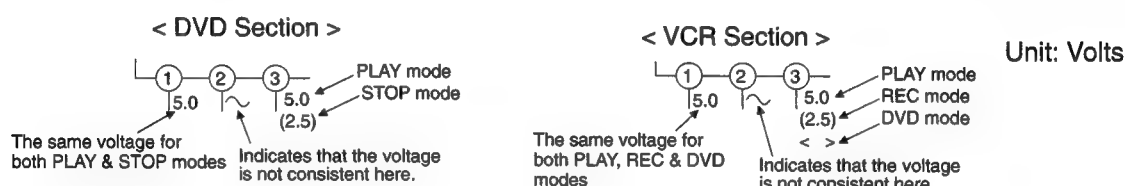
Fixed Voltage (or Auto voltage selectable) power supply circuit is used in this unit.

If Main Fuse (F1001) is blown, first check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply. Otherwise it may cause some components in the power supply circuit to fail.

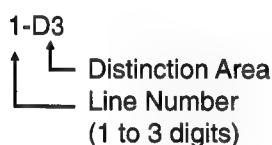
### 3. Note:

- (1) Do not use the part number shown on the drawings for ordering. The correct part number is shown in the parts list, and may be slightly different or amended since the drawings were prepared.
- (2) To maintain original function and reliability of repaired units, use only original replacement parts which are listed with their part numbers in the parts list section of the service manual.

4. Voltage indications for PLAY and REC modes on the schematics are as shown below:

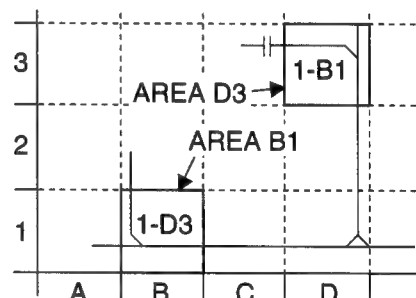


### 5. How to read converged lines



Examples:

1. "1-D3" means that line number "1" goes to the line number "1" of the area "D3".
2. "1-B1" means that line number "1" goes to the line number "1" of the area "B1".



### 6. Test Point Information

⊙ : Indicates a test point with a jumper wire across a hole in the PCB.

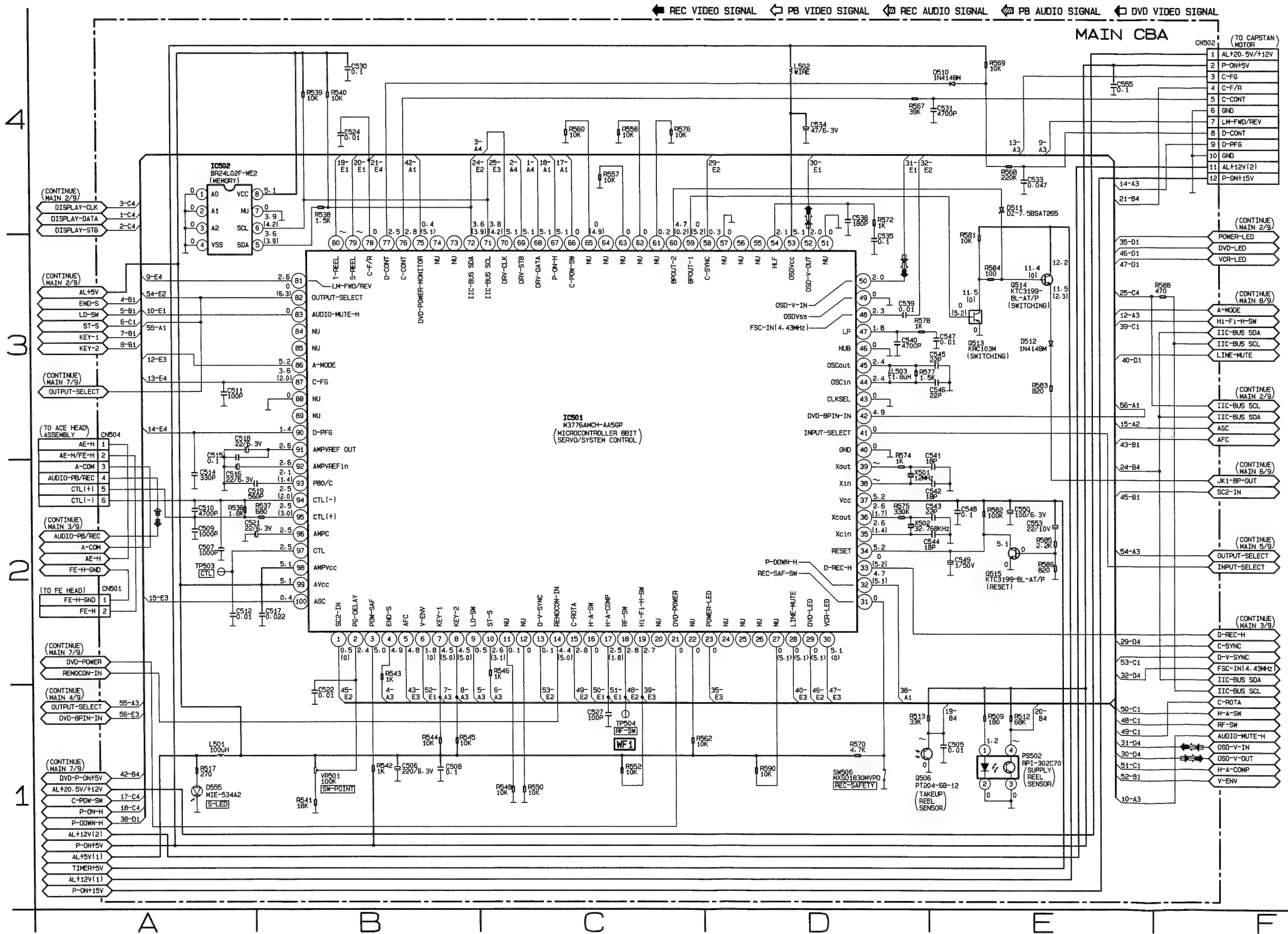
□→ : Used to indicate a test point with a component lead on foil side.

⊘ : Used to indicate a test point with no test pin.

● : Used to indicate a test point with a test pin.

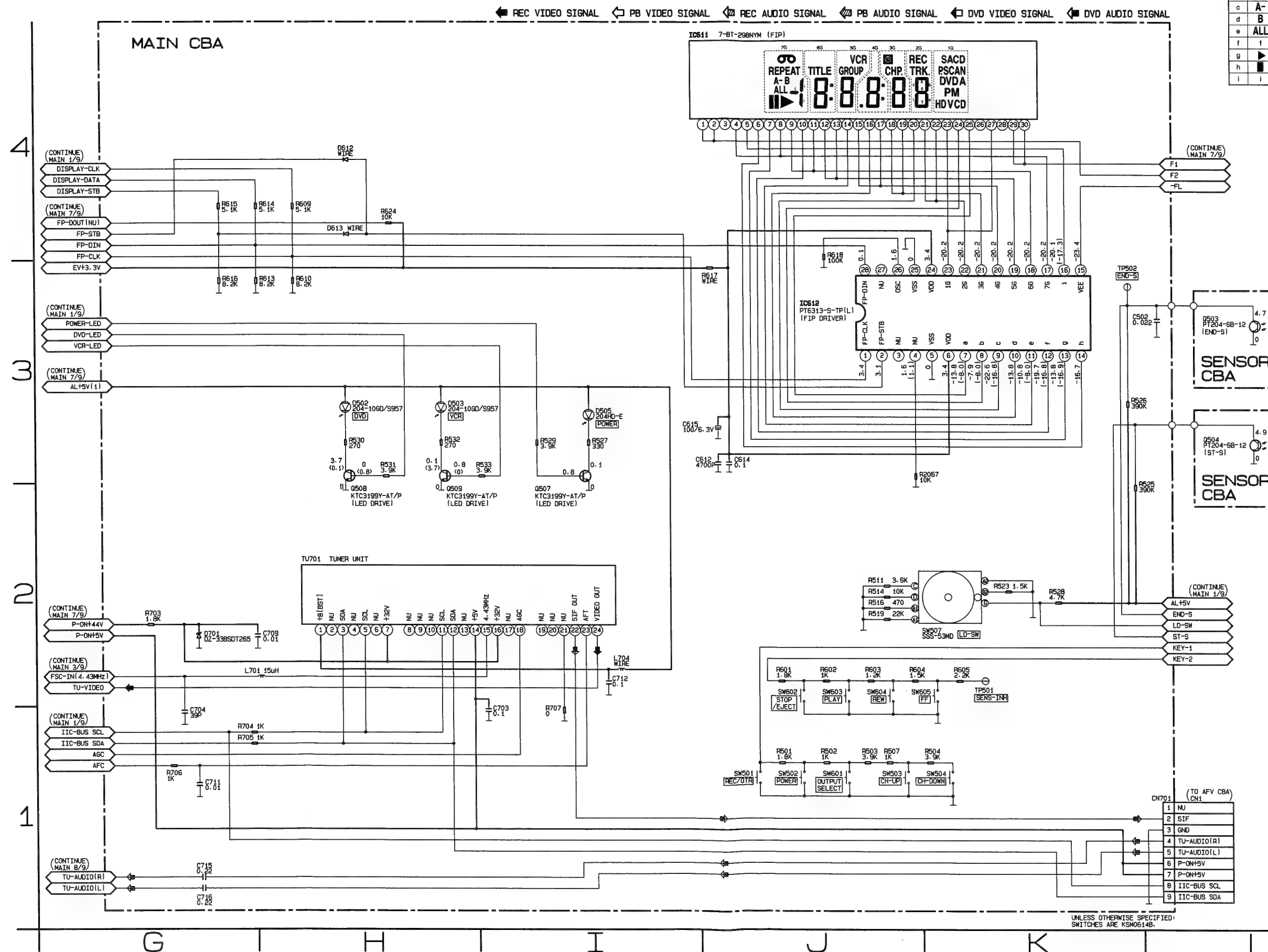


Main 1/8 Schematic Diagram < VCR Section >



### Main 2/8 & Sensor Schematic Diagram < VCR Section >

IC611 MATRIX CHART							
	7G	6G	5G	4G	3G	2G	1G
a		a	a	a	a	a	<b>SACD</b>
b	<b>REPEAT</b>	b	b	b	b	b	<b>PSCAN</b>
c	<b>A-</b>	c	c	c	c	c	<b>DVD</b>
d	<b>B</b>	d	d	d	d	d	<b>A</b>
e	<b>ALL</b>	e	e	e	e	e	<b>P</b>
f		f	f	f	f	f	<b>M</b>
g		g	g	g	g	g	<b>HD</b>
h		<b>:</b>	<b>GROUP</b>	<b>:</b>	<b>CHP.</b>	<b>TRK.</b>	<b>V</b>
i		<b>TITLE</b>	<b>VCR</b>	<b>.</b>		<b>REC</b>	<b>CD</b>



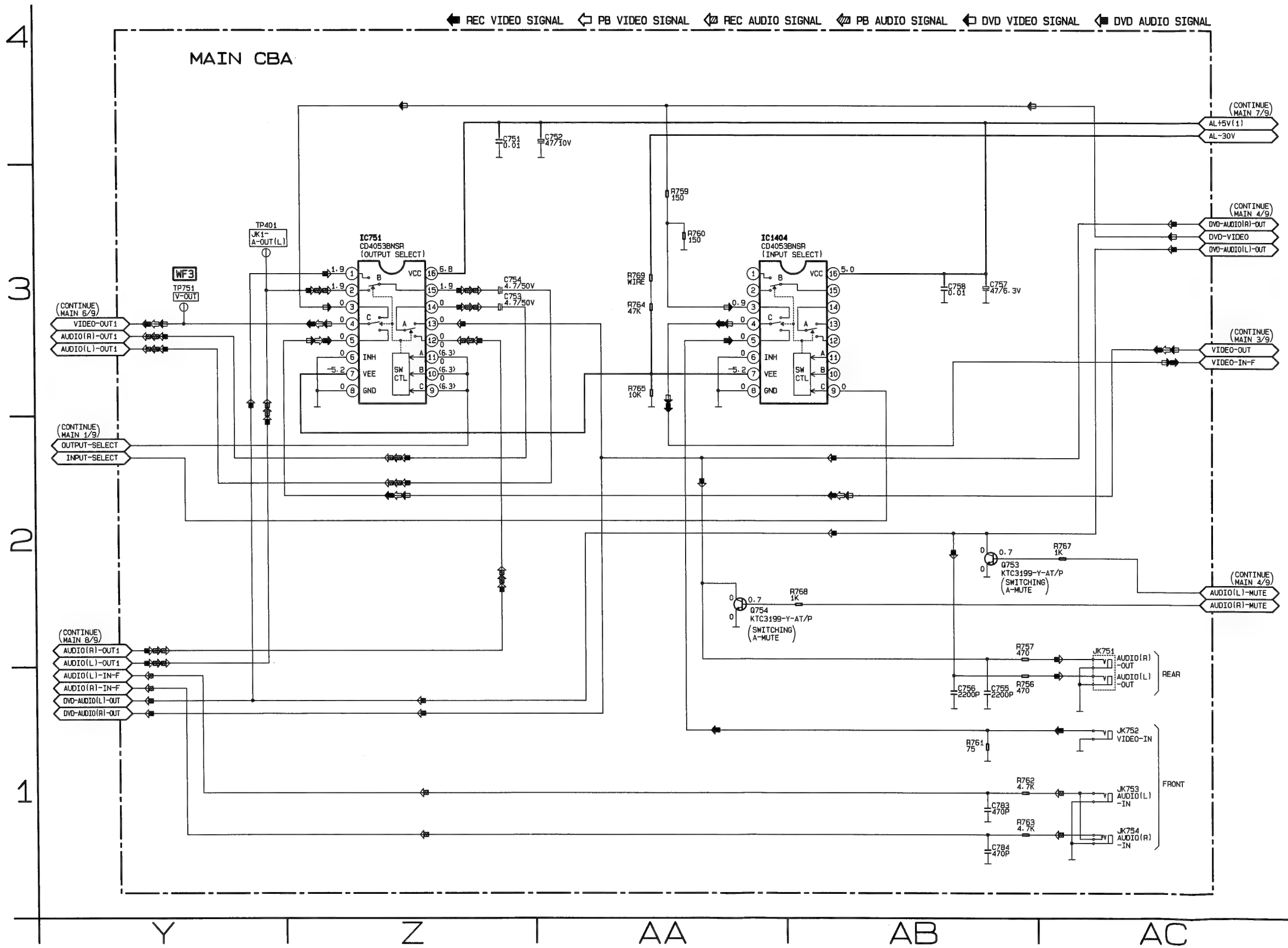
## 1



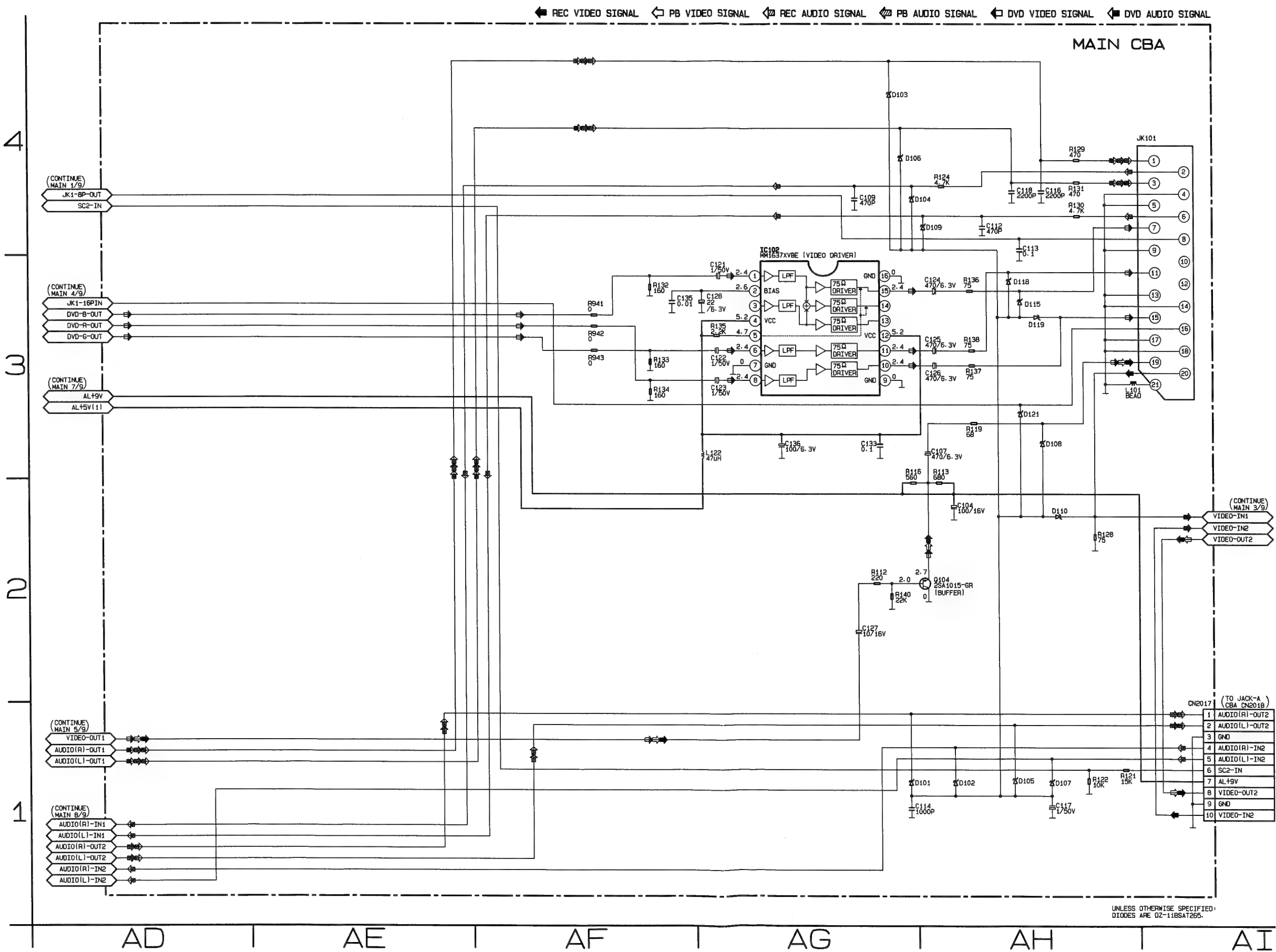
◀ PB VIDEO SIGNAL    ◀ DVD VIDEO SIGNAL    ◀ DVD AUDIO SIGNAL



Main 5/8 Schematic Diagram < VCR Section >

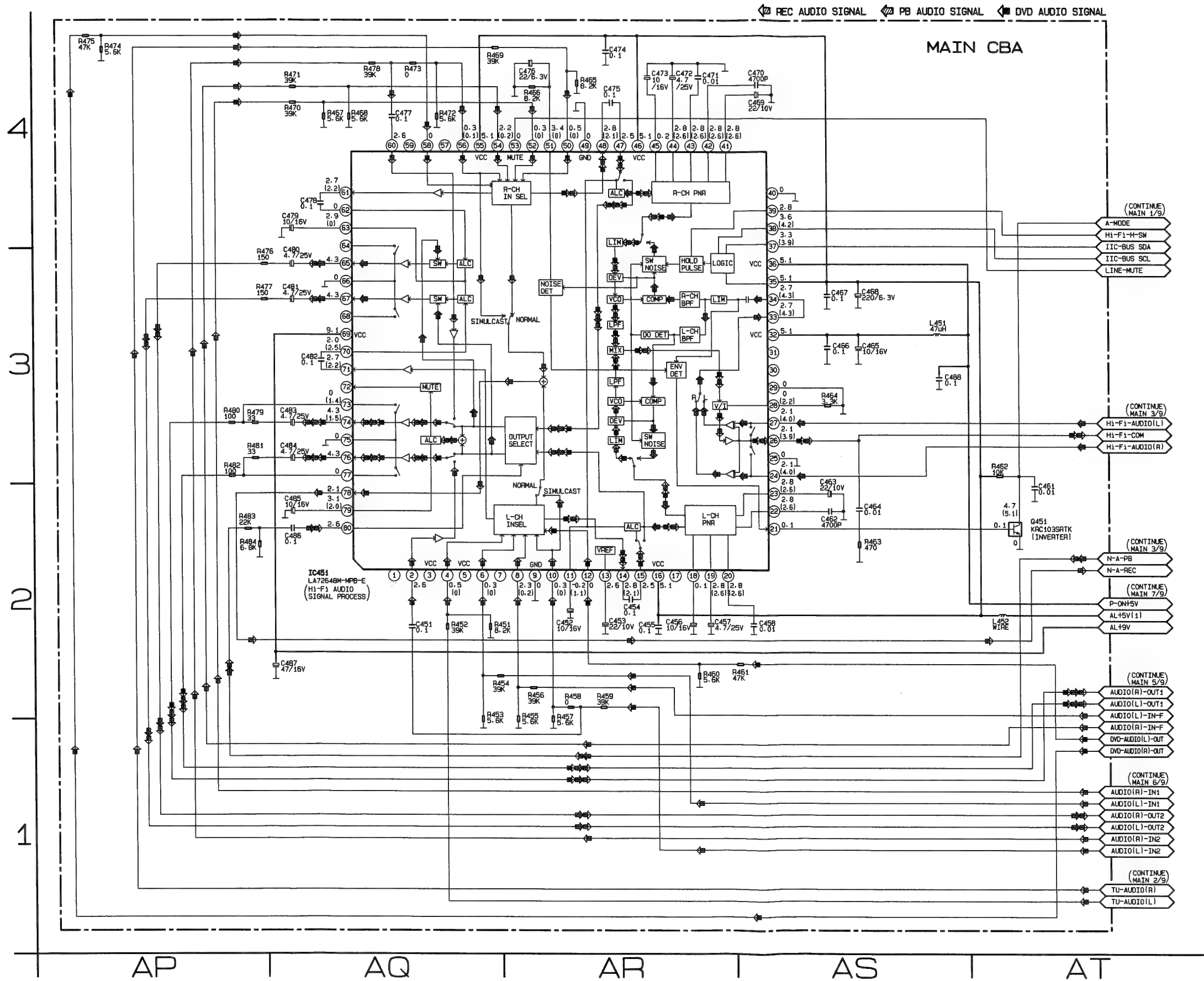


Main 6/8 Schematic Diagram < VCR Section >





Main 8/8 Schematic Diagram < VCR Section >



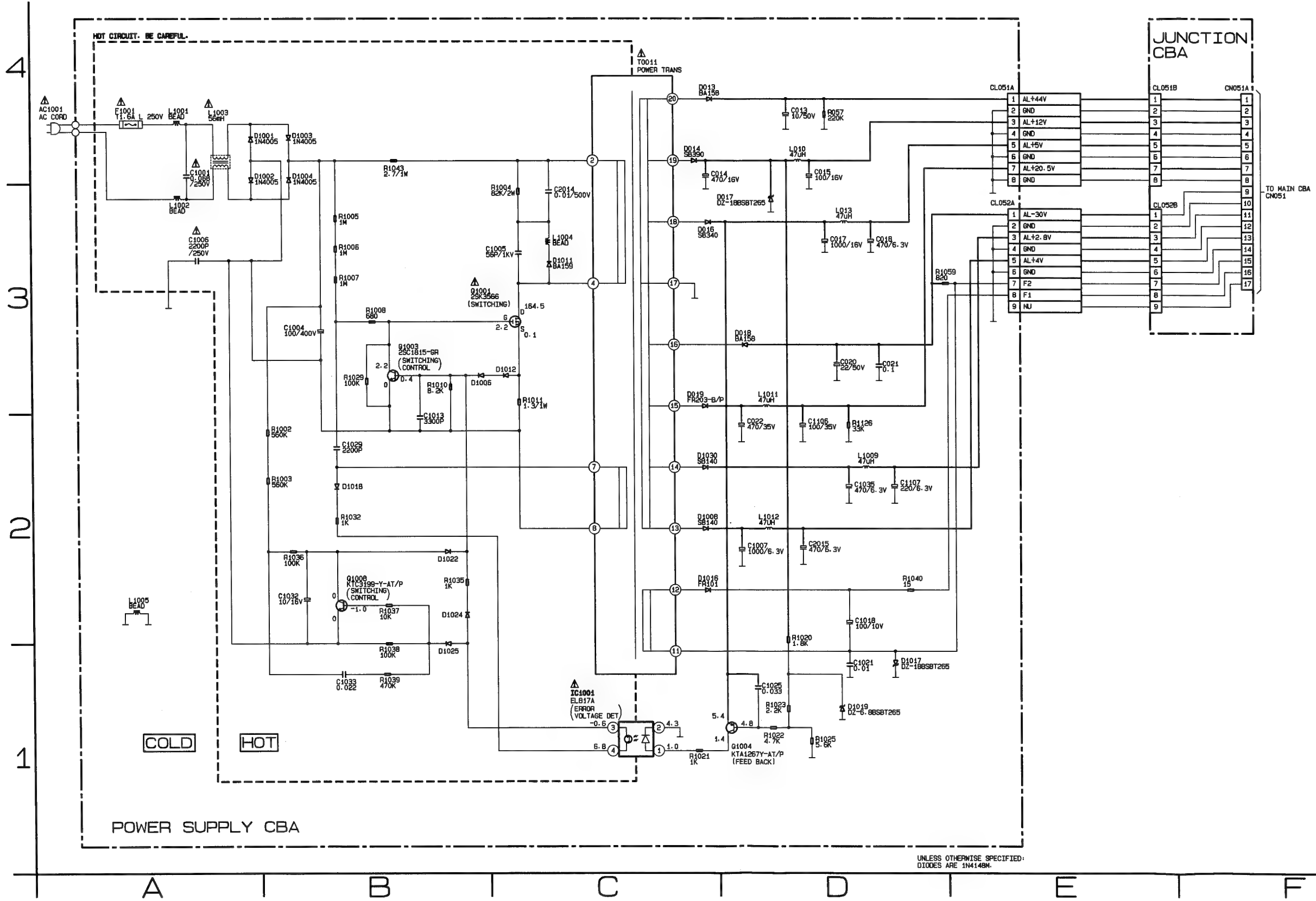


Power Supply & Junction Schematic Diagram < VCR Section >

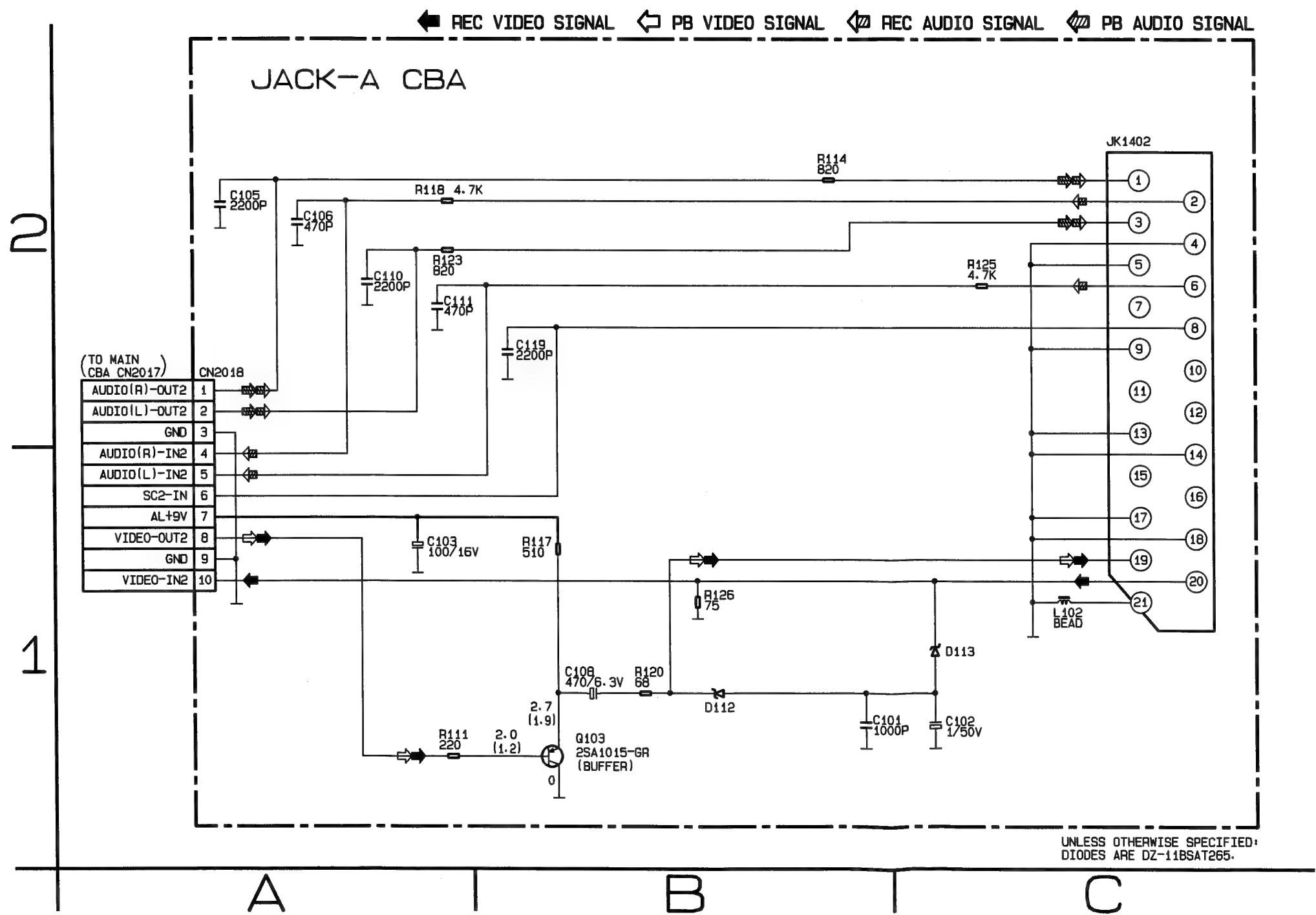
**CAUTION !**  
For continued protection against fire hazard,  
replace only with the same type fuse.

**NOTE:**  
The voltage for parts in hot circuit is measured using  
hot GND as a common terminal.

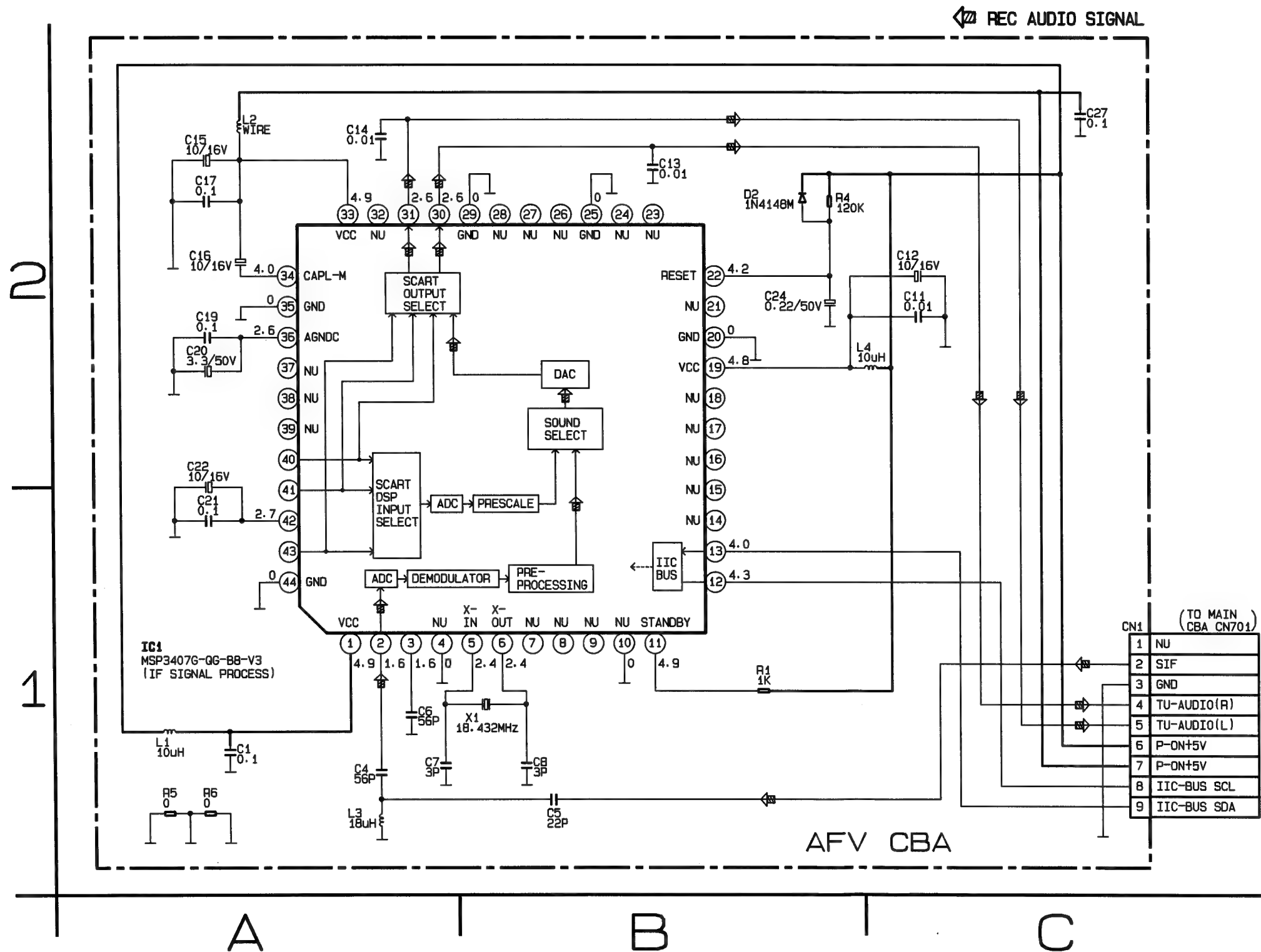
**CAUTION !**  
Fixed voltage (or Auto voltage selectable) power supply circuit is used in this unit.  
If Main Fuse (F1001) is blown , check to see that all components in the power supply  
circuit are not defective before you connect the AC plug to the AC power supply.  
Otherwise it may cause some components in the power supply circuit to fail.



Jack - A Schematic Diagram < VCR Section >

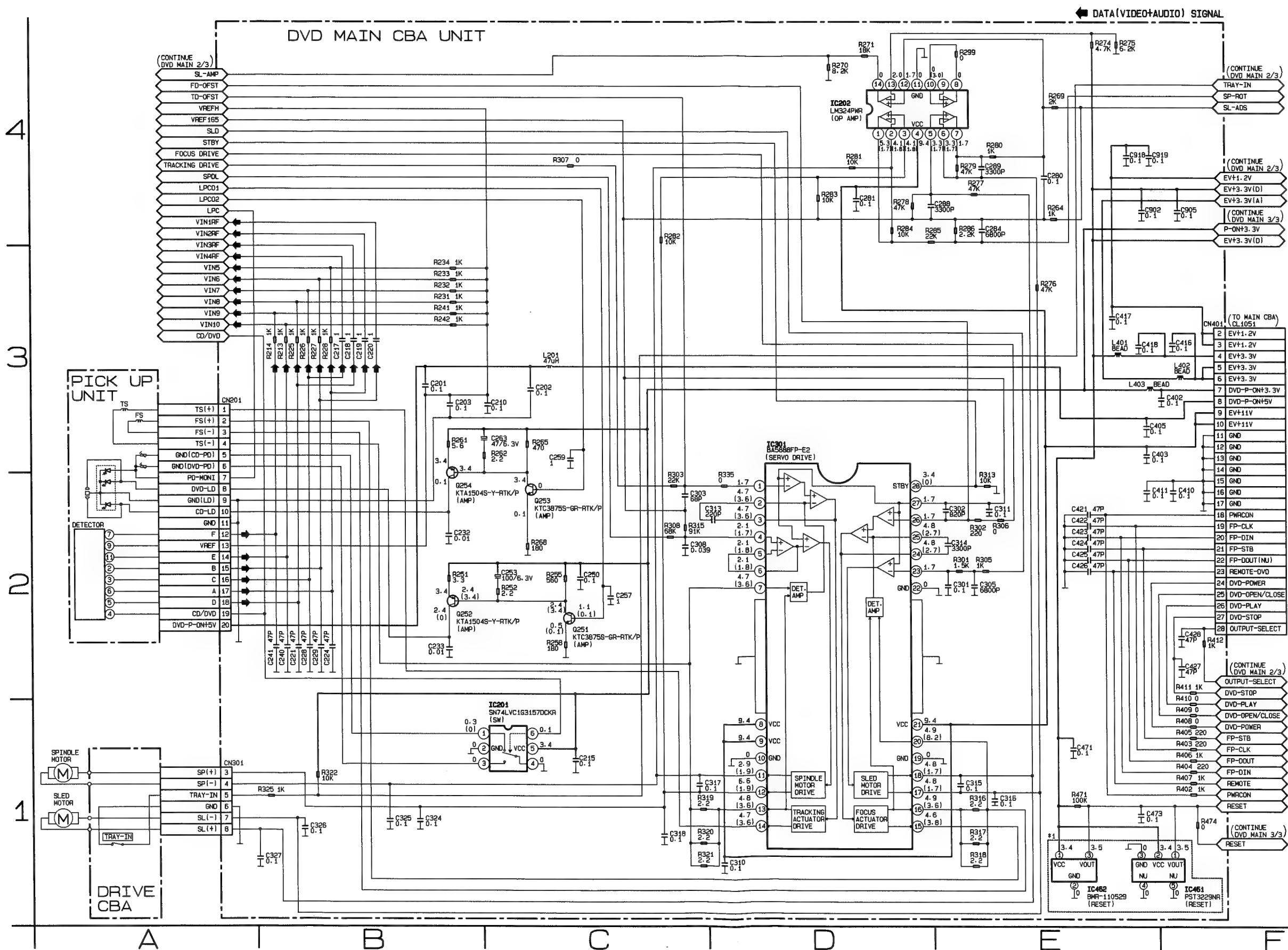


AFV Schematic Diagram < VCR Section >

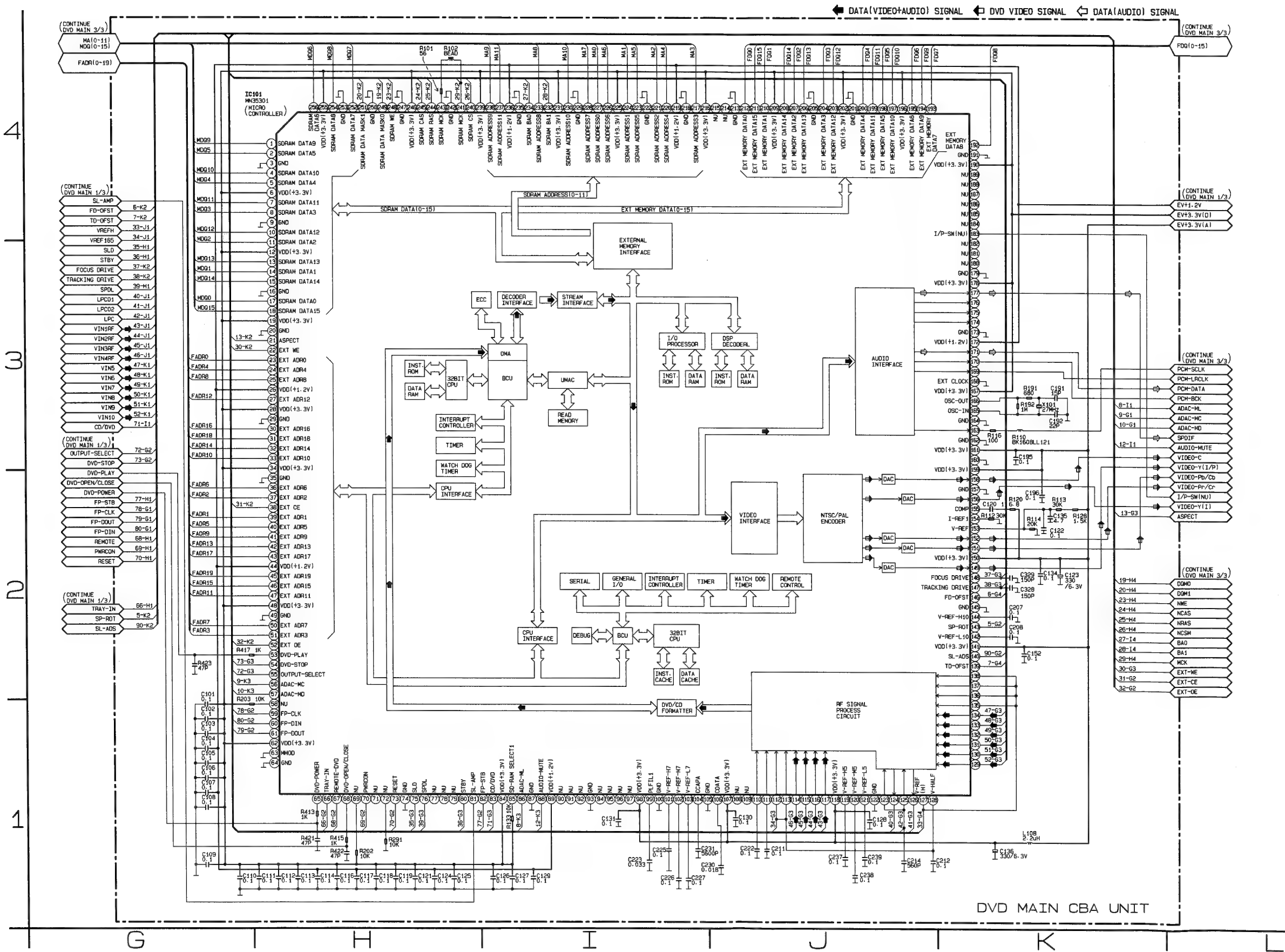


DVD Main 1/3 Schematic Diagram < DVD Section >

\*1 NOTE:  
Either IC461 or IC462 is used for DVD MAIN CBA UNIT.



DVD Main 2/3 Schematic Diagram < DVD Section >



IC101 Voltage Chart

~ : Voltage is not consistent    ---- : Not used    Unit : Volts

PIN.NO	PLAY	STOP	PIN.NO	PLAY	STOP	PIN.NO	PLAY	STOP	PIN.NO	PLAY	STOP	PIN.NO	PLAY	STOP	PIN.NO	PLAY	STOP	PIN.NO	PLAY	STOP	PIN.NO	PLAY	STOP
1	~	~	33	~	~	65	0	0	97	----	----	129	2.3	2.3	161	3.4	3.4	193	~	~	225	3.4	3.4
2	~	~	34	3.4	3.4	66	3.4	3.5	98	3.4	3.4	130	2.3	2.3	162	0	0	194	~	~	226	~	~
3	0	0	35	0	0	67	3.2	3.2	99	0.9	0.8	131	2.3	2.3	163	1.8	1.8	195	~	~	227	~	~
4	~	~	36	~	~	68	0	0	100	0	0	132	2.4	2.3	164	0	0	196	3.4	3.4	228	~	~
5	~	~	37	~	~	69	3.4	3.4	101	2.4	2.4	133	2.4	2.4	165	1.7	1.8	197	~	~	229	0	0
6	3.4	3.4	38	0.4	0.3	70	3.4	3.4	102	2.2	2.2	134	2.4	2.4	166	1.7	1.7	198	~	~	230	~	~
7	~	~	39	~	~	71	----	----	103	1.9	1.9	135	2.3	2.3	167	3.4	3.4	199	~	~	231	3.4	3.4
8	~	~	40	~	~	72	1.4	2.7	104	0.4	0.3	136	2.3	2.3	168	0	0	200	~	~	232	1.3	1.6
9	0	0	41	~	~	73	3.4	3.4	105	0	0	137	2.3	2.3	169	1.8	1.8	201	0	0	233	~	~
10	~	~	42	~	~	74	0	0	106	1.7	1.7	138	2.3	2.3	170	1.7	1.7	202	3.4	3.4	234	1.9	2.3
11	~	~	43	~	~	75	1.7	1.8	107	3.4	3.4	139	1.7	1.7	171	1.3	0.1	203	~	~	235	0	0
12	3.4	3.4	44	1.3	1.3	76	2.3	1.8	108	----	----	140	1.7	1.7	172	1.3	1.3	204	~	~	236	1.3	1.3
13	~	~	45	~	~	77	----	----	109	----	----	141	3.4	3.4	173	0	0	205	0	0	237	----	----
14	~	~	46	~	~	78	----	----	110	1.9	1.9	142	1.3	1.3	174	----	----	206	~	~	238	~	~
15	~	~	47	~	~	79	----	----	111	1.9	1.9	143	2.1	1.7	175	----	----	207	~	~	239	3.4	3.4
16	0	0	48	3.4	3.4	80	3.4	0.1	112	1.7	1.7	144	2.2	2.2	176	----	----	208	~	~	240	3.4	3.3
17	~	~	49	0	0	81	0.1	0.1	113	1.7	1.7	145	0	0	177	1.8	1.7	209	3.4	3.4	241	1.9	1.9
18	~	~	50	~	~	82	2.8	2.8	114	1.7	1.7	146	1.7	1.7	178	3.4	3.5	210	~	~	242	0	0
19	3.4	3.4	51	~	~	83	0.1	0.1	115	1.7	1.7	147	1.8	1.7	179	0	0	211	~	~	243	1.9	1.9
20	0	0	52	0.8	0.8	84	3.4	3.4	116	1.7	1.7	148	1.7	1.7	180	----	----	212	~	~	244	3.4	3.3
21	----	----	53	0	0	85	0.1	0.1	117	1.7	1.7	149	0.6	0.5	181	----	----	213	0	0	245	3.4	3.4
22	3.5	3.5	54	0	0	86	3.6	3.4	118	3.4	3.4	150	3.4	3.4	182	----	----	214	----	----	246	3.4	3.4
23	~	~	55	1.4	1.4	87	0	0	119	2.0	2.0	151	0.5	0.6	183	3.5	3.5	215	----	----	247	0	0
24	~	~	56	3.4	3.4	88	3.5	0.1	120	1.7	1.7	152	0.5	0.4	184	----	----	216	3.4	3.4	248	3.3	3.4
25	~	~	57	3.5	3.5	89	1.3	1.3	121	1.5	1.5	153	1.4	1.3	185	----	----	217	~	~	249	3.2	3
26	1.3	1.3	58	3.4	3.4	90	----	----	122	0	0	154	1.4	1.3	186	----	----	218	0	0	250	0	0
27	~	~	59	3.4	3.4	91	----	----	123	0.3	0.1	155	2.4	2.4	187	----	----	219	1.3	1.3	251	3.2	3.0
28	3.4	3.4	60	3.4	3.4	92	----	----	124	1.2	0.1	156	3.4	3.4	188	----	----	220	~	~	252	~	~
29	0	0	61	3.5	3.5	93	0	0	125	0.3	0.1	157	0	0	189	----	----	221	~	~	253	0	0
30	~	~	62	3.4	3.4	94	----	----	126	0.1	0.1	158	0.9	0.9	190	3.4	3.5	222	0	0	254	~	~
31	~	~	63	0	0	95	----	----	127	2.3	2.3	159	3.4	3.4	191	0	0	223	~	~	255	3.4	3.4
32	~	~	64	0	0	96	----	----	128	1.7	1.7	160	0	0	192	~	~	224	~	~	256	~	~

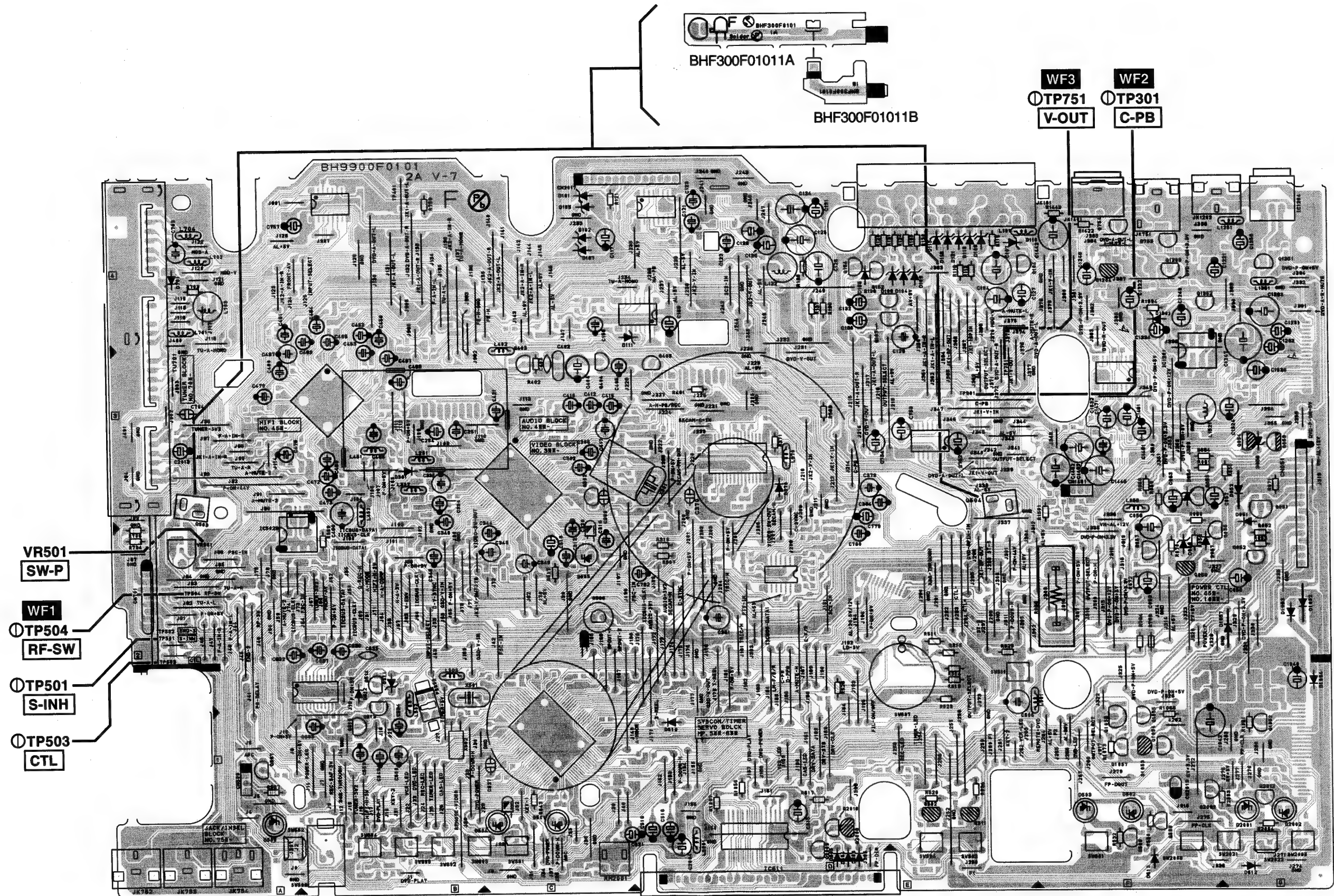
## 4





# Main CBA Top View

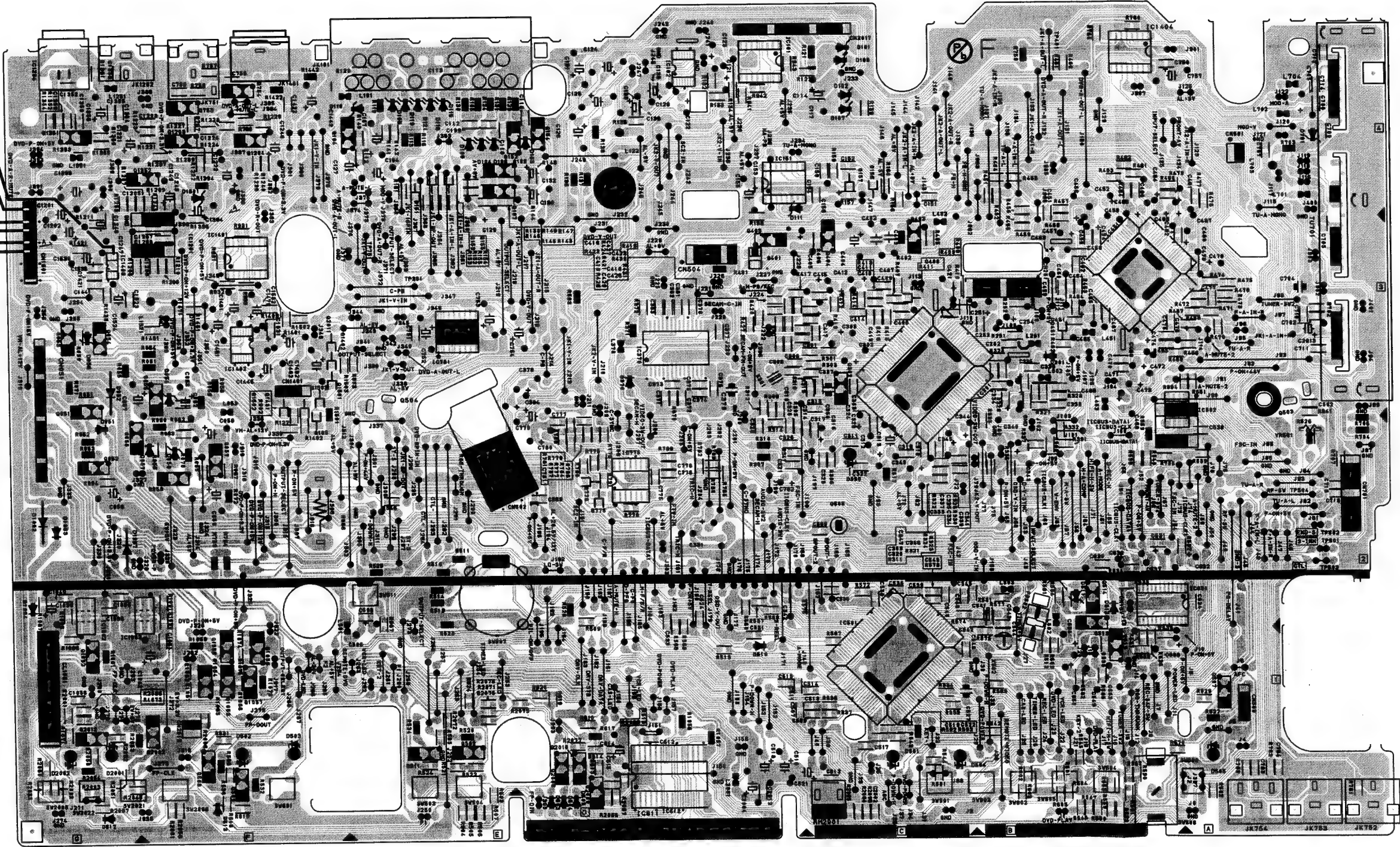
## Sensor CBA Top View



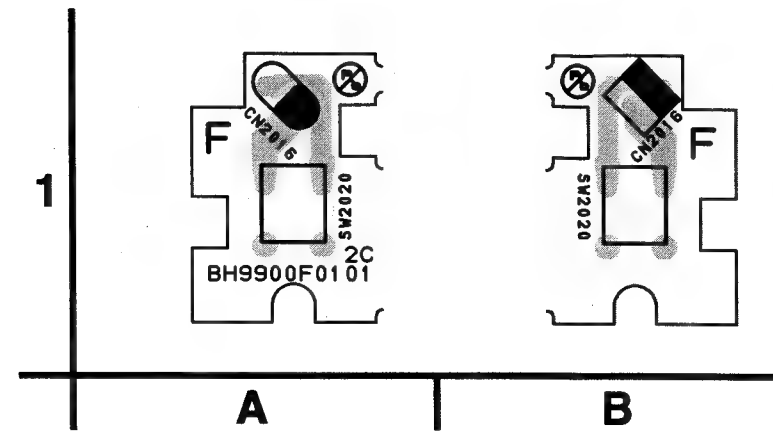


Main CBA Bottom View

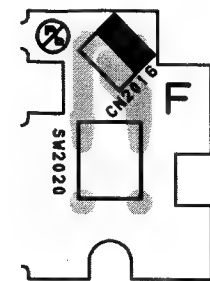
- WF6  
PIN 6 OF  
IC1403
- WF9  
PIN 18 OF  
CN1601
- WF8  
PIN 15 OF  
CN1601
- WF7  
PIN 13 OF  
CN1601
- WF5  
PIN 10 OF  
CN1601
- WF4  
PIN 8 OF  
CN1601



DVD Open/Close  
CBA Top View

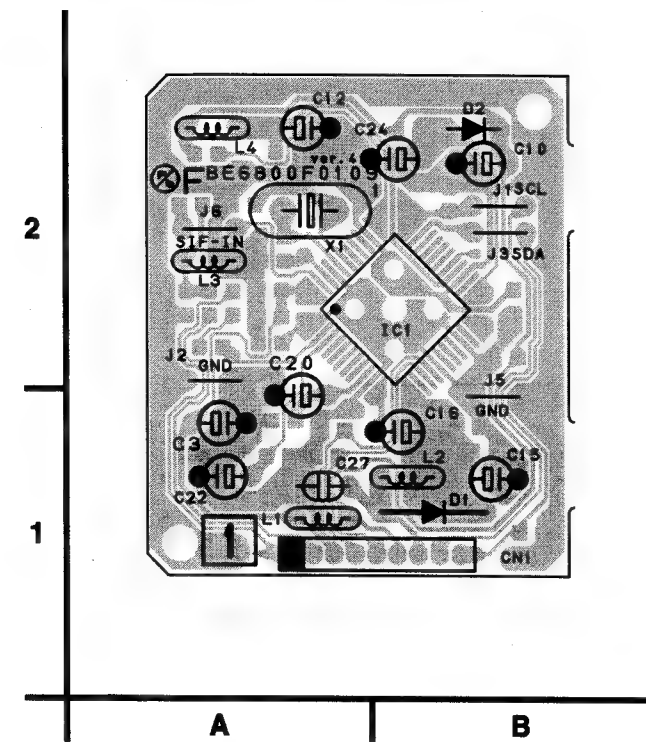


DVD Open /Close  
CBA Bottom View

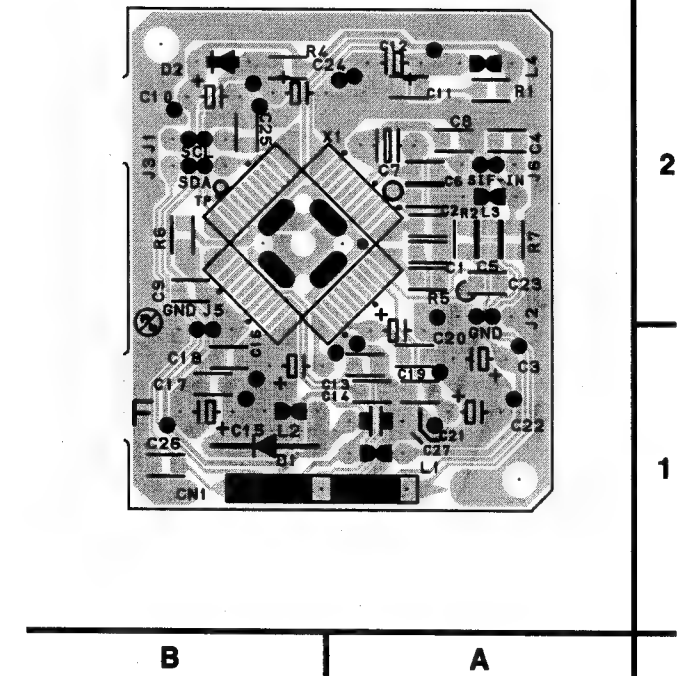


BH9900F01012C

AFV CBA Top View

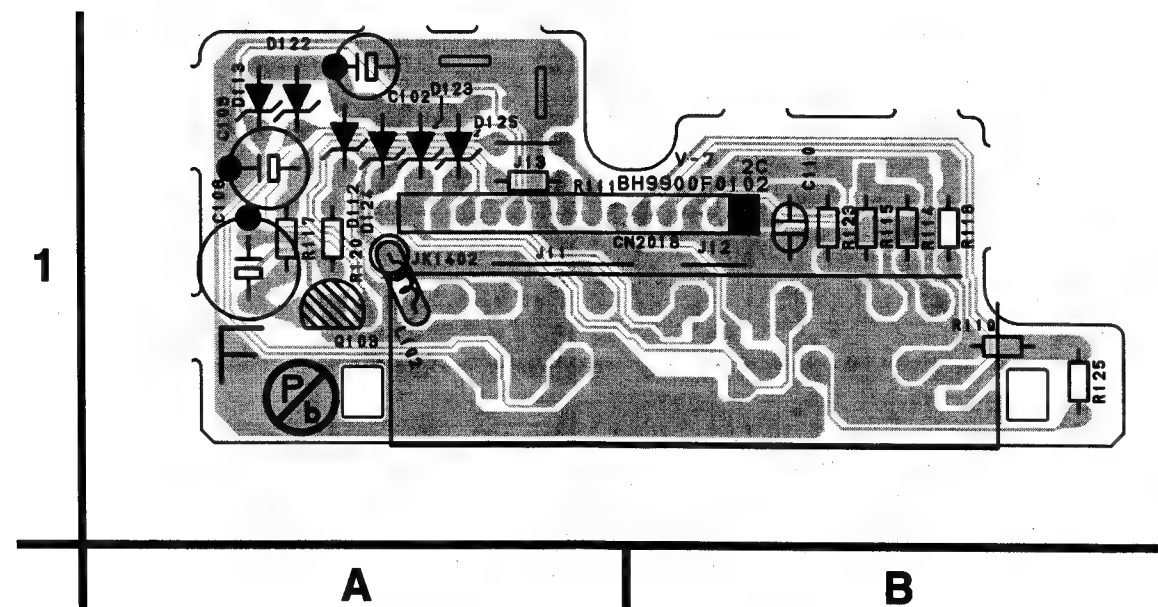


AFV CBA Bottom View

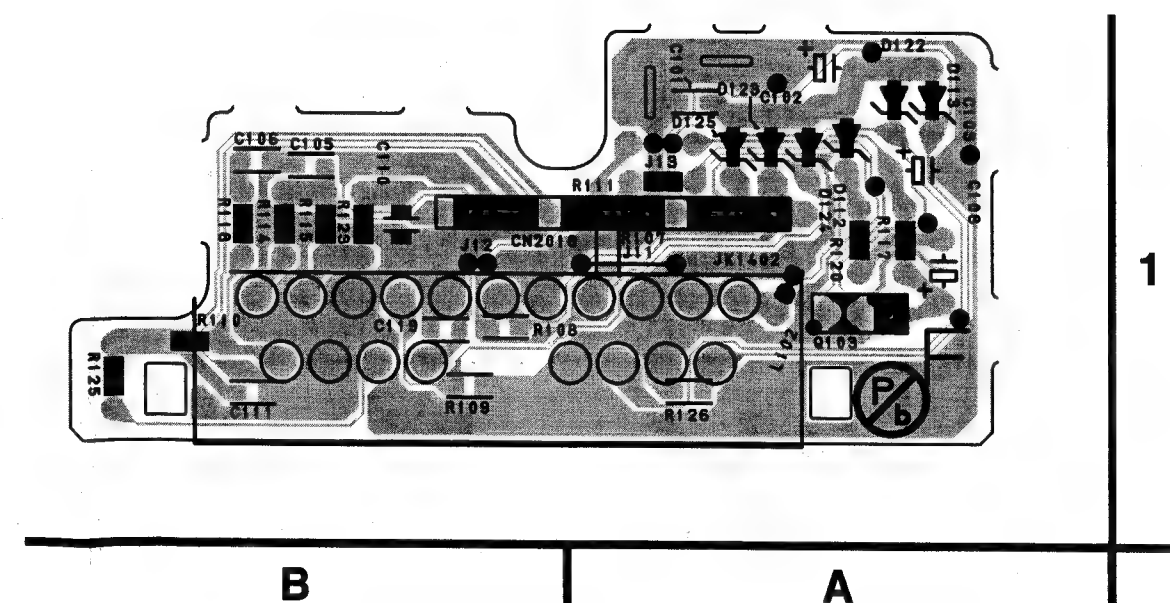


BE6800F01091

Jack -A CBA Top View



Jack -A CBA Bottom View



BH9900F01022C



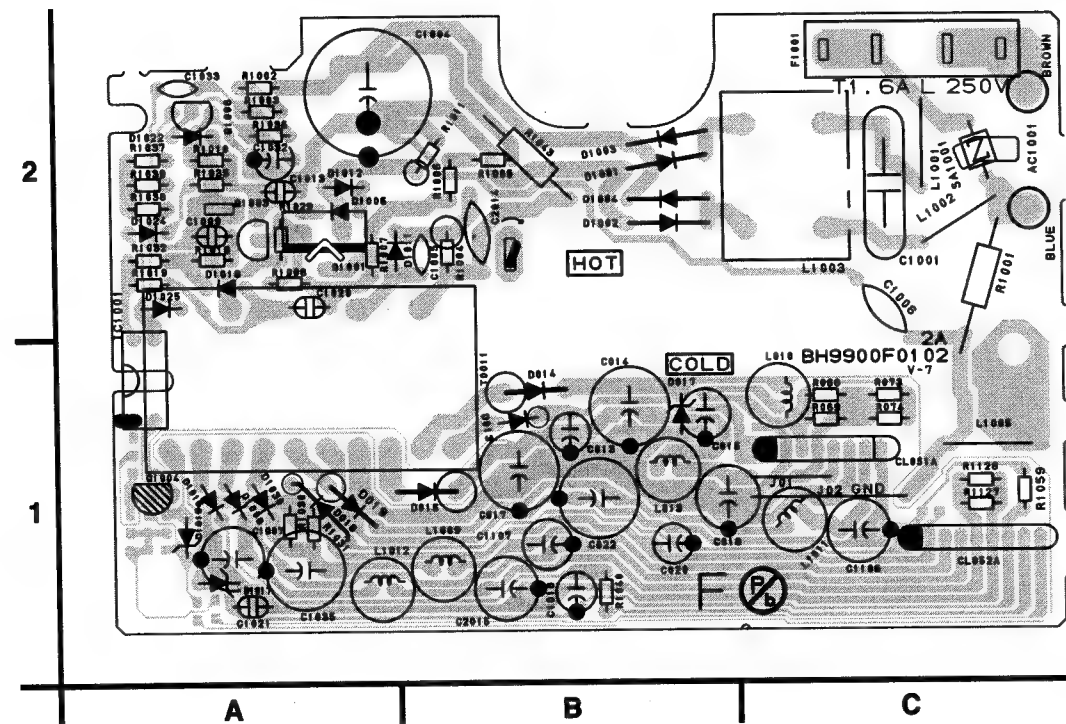
### Power Supply CBA Top View

**CAUTION !**

For continued protection against fire hazard,  
replace only with the same type fuse.

**NOTE:**

The voltage for parts in hot circuit is measured using hot GND as a common terminal.

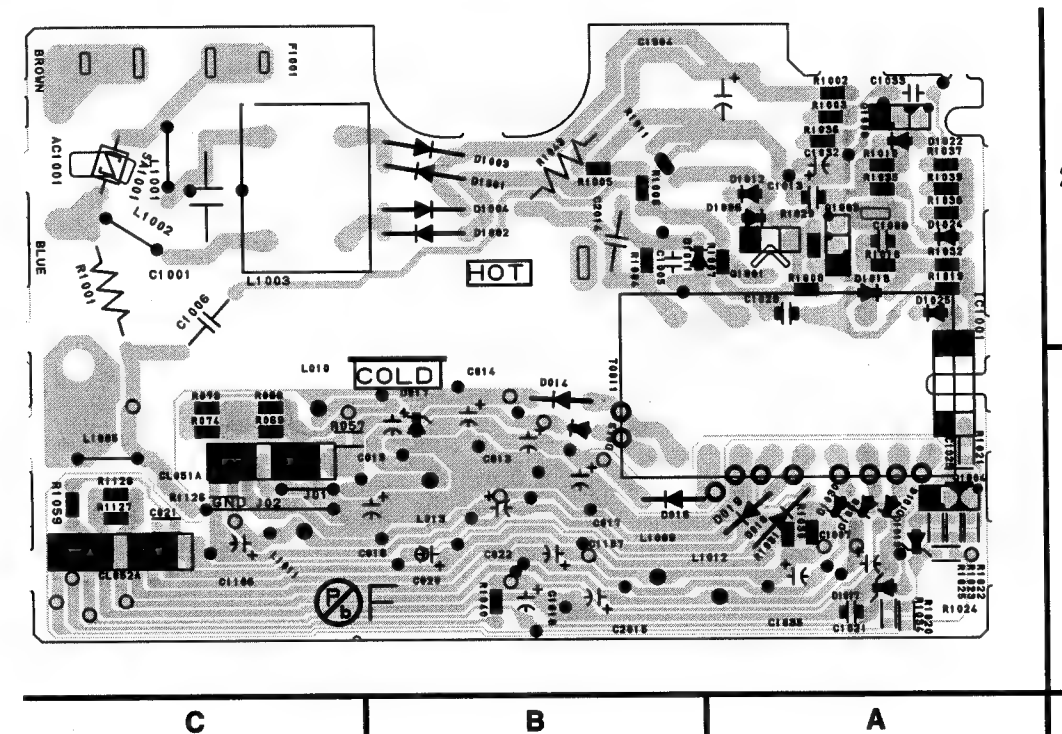


### Power Supply CBA Bottom View

**CAUTION !**

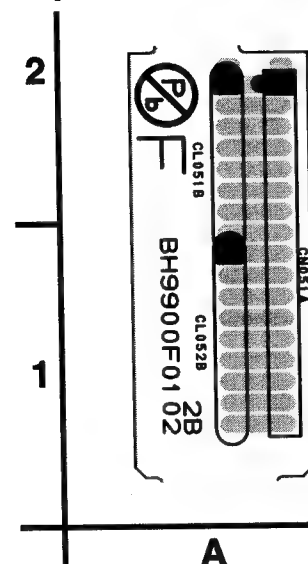
Fixed voltage (or Auto voltage selectable) power supply circuit is used in this unit. If Main Fuse (F1001) is blown, check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply. Otherwise it may cause some components in the power supply circuit to fail.

**Because a hot chassis ground is present in the power supply circuit, an isolation transformer must be used. Also, in order to have the ability to increase the input slowly, when troubleshooting this type power supply circuit, a variable isolation transformer is required.**

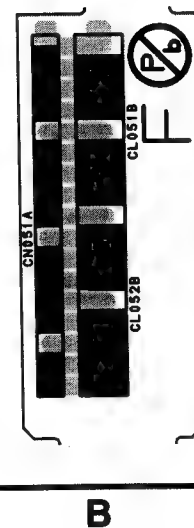


BH9900F01022A

### Junction CBA Top View



### Junction CBA Bottom View



BH9900F01022B

# WAVEFORMS

## NOTE:

Input

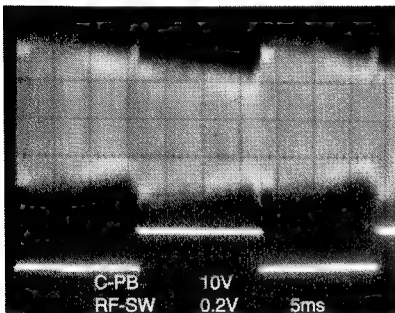
VCR: COLOR BAR SIGNAL (WITH 1KHz AUDIO SIGNAL)  
(WF1~WF3)

DVD: POWER ON (STOP) MODE  
(WF4~WF6)

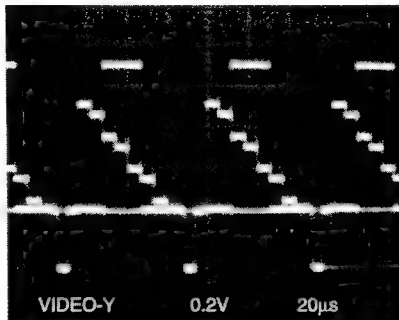
CD: 1kHz PLAY  
(WF7~WF9)

**WF2** UPPER TP301

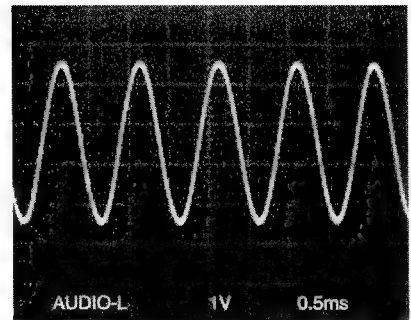
**WF1** LOWER TP504



**WF4** Pin 8 of CN1601

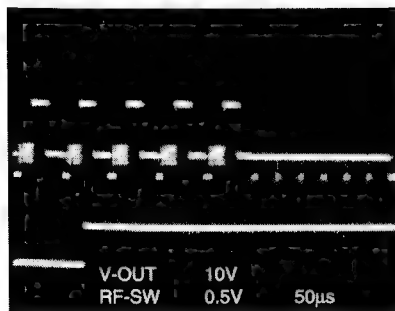


**WF7** Pin 13 of CN1601

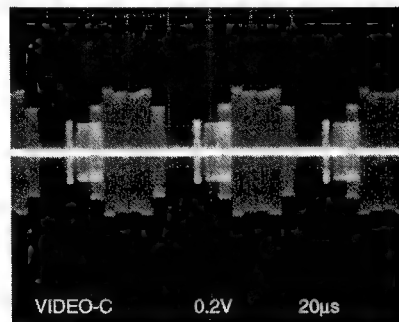


**WF3** UPPER TP751

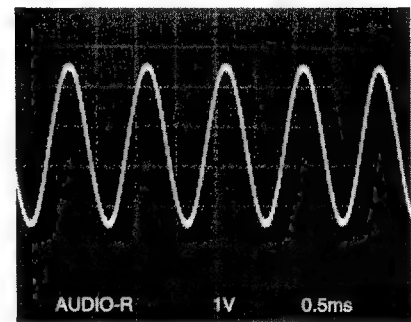
**WF1** LOWER TP504



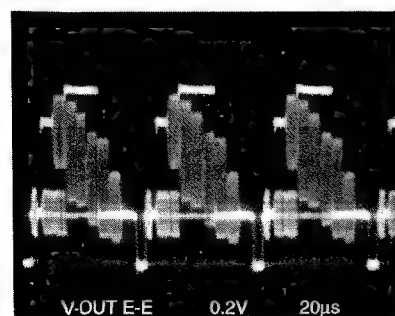
**WF5** Pin 10 of CN1601



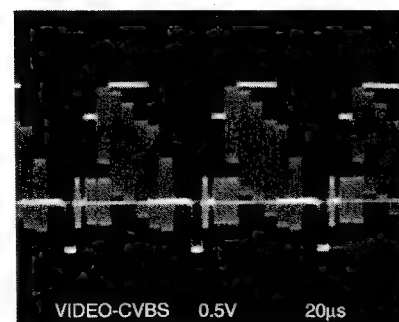
**WF8** Pin 15 of CN1601



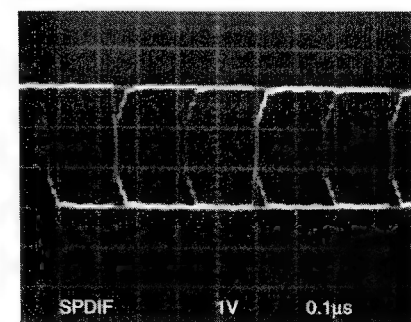
**WF3** TP751



**WF6** Pin 6 of IC1403



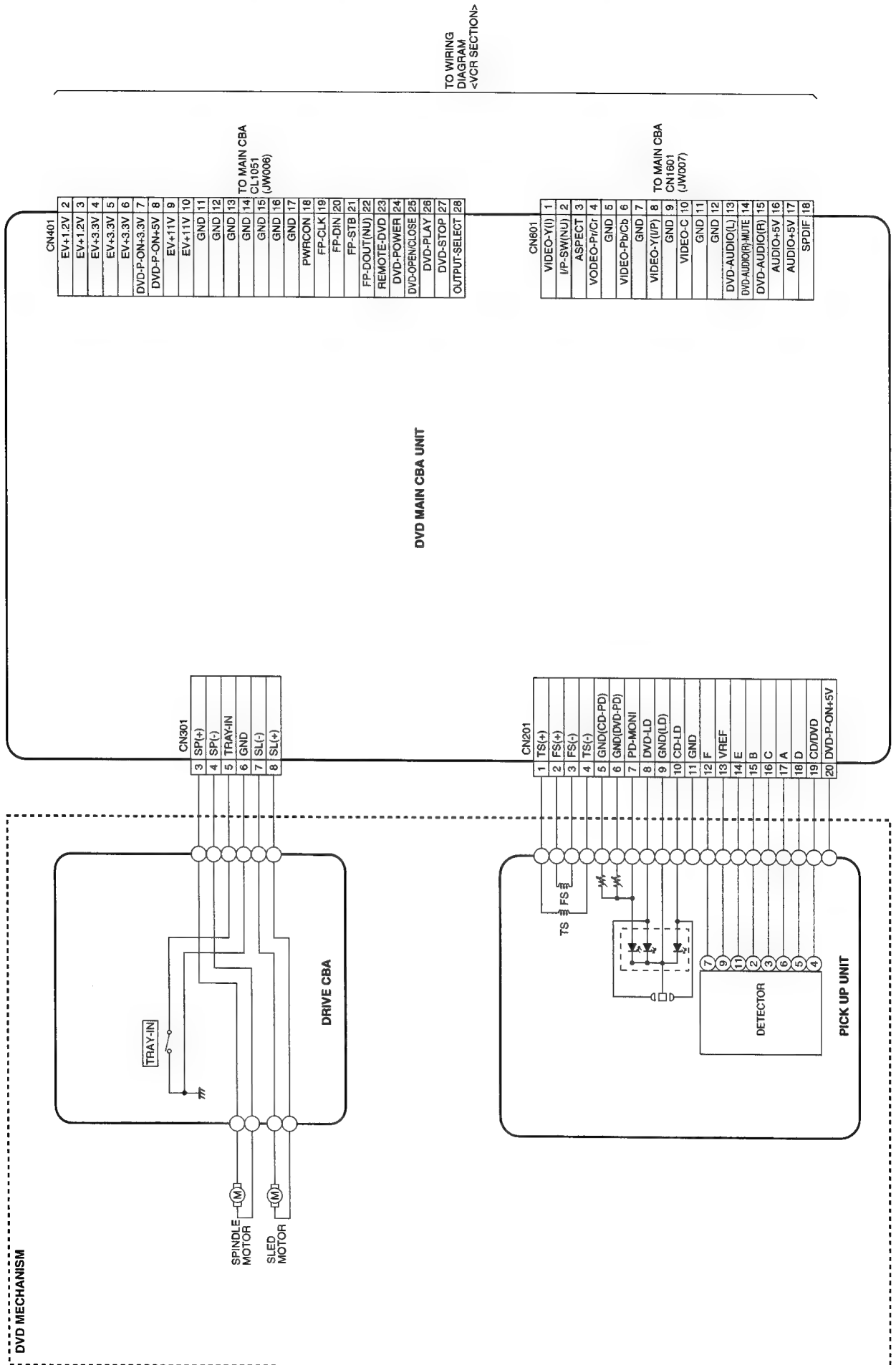
**WF9** Pin 18 of CN1601



TO WIRING  
DIAGRAM  
<DVD SECTION>



## WIRING DIAGRAM < DVD SECTION >



# IC PIN FUNCTION DESCRIPTIONS

## [ VCR Section ]

### IC501( SERVO / SYSTEM CONTROL IC )

“H” ≥ 4.5V, “L” ≤ 1.0V

Pin No.	IN/ OUT	Signal Name	Function	Active Level
1	IN	SC2-IN	Input Signal from Pin 8 of SCART2	A/D
2	IN	PG-DELAY	Video Head Switching Pulse Signal Adjusted Voltage	A/D
3	IN	POW-SAF	P-ON Power Detection Input Signal	A/D
4	IN	END-S	Tape End Position Detect Signal	A/D
5	IN	AFC	Automatic Frequency Control Signal	A/D
6	IN	V-ENV	Video Envelope Comparator Signal	A/D
7	IN	KEY-1	Key Scan Input Signal 1	A/D
8	IN	KEY-2	Key Scan Input Signal 2	A/D
9	IN	LD-SW	Deck Mode Position Detector Signal	A/D
10	IN	ST-S	Tape Start Position Detector Signal	A/D
11	-	NU	Not Used	-
12	-	NU	Not Used	-
13	OUT	D-V- SYNC	Dummy V-sync Output	H/Hi-z
14	IN	REMOCON-IN	Remote Control Sensor	L
15	OUT	C-ROTA	Color Phase Rotary Changeover Signal	H/L
16	OUT	H-A-SW	Video Head Amp Switching Pulse	H/L
17	IN	H-A-COMP	Head Amp Comparator Signal	H/L
18	OUT	RF-SW	Video Head Switching Pulse	H/L
19	OUT	Hi-Fi-H-SW	HiFi Audio Head Switching Pulse	H/L
20	-	NU	Not Used	-
21	OUT	DVD-POWER	DVD Power Control Signal	H
22	-	NU	Not Used	-
23	OUT	POWER-LED	“POWER” LED Signal Output	H/L
24	-	NU	Not Used	-

Pin No.	IN/ OUT	Signal Name	Function	Active Level
25	-	NU	Not Used	-
26	-	NU	Not Used	-
27	-	NU	Not Used	-
28	OUT	LINE-MUTE	Audio Mute Control Signal	H
29	OUT	DVD-LED	“DVD” LED Signal Output	H/L
30	OUT	VCR-LED	“VCR” LED Signal Output	H/L
31	IN	REC-SAF-SW	Recording Safety SW Detect (With Record tab="L"/ With out Record tab="H")	H/L
32	IN	P-DOWN -H	Power Voltage Down Detector Signal	H
33	OUT	D-REC-H	Delayed Record Signal	H
34	IN	RESET	System Reset Signal (Reset="L")	L
35	IN	Xcin	Sub Clock	-
36	OUT	Xcout	Sub Clock	-
37	-	Vcc	Vcc	-
38	IN	Xin	Main Clock Input	-
39	OUT	Xout	Main Clock Input	-
40	-	GND	Vss(GND)	-
41	OUT	INPUT-SELECT	Input Selector Control Signal	H/L
42	IN	DVD-8PIN-IN	SCART 8Pin DVD Input Control Signal	H/L
43	IN	CLKSEL	Clock Select (GND)	L
44	IN	OSCin	Clock Input for letter size	-
45	OUT	OSCut	Clock Output for letter size	-
46	-	NUB	Not Used	-
47	IN	LP	LP	-
48	IN	FSC-IN [4.43MHz]	4.43MHz Clock Input	-
49	-	OSDVss	OSDVss	-
50	IN	OSD-V-IN	OSD Video Signal Input	-
51	-	NU	Not Used	-
52	OUT	OSD-V-OUT	OSD Video Signal Output	-
53	-	OSDVcc	OSDVcc	-
54	-	HLF	LPF Connected Terminal (Slicer)	-

Pin No.	IN/ OUT	Signal Name	Function	Active Level
55	-	NU	Not Used	-
56	-	NU	Not Used	-
57	-	NU	Not Used	-
58	IN	C-SYNC	Composite Synchronized Pulse	PULSE
59	OUT	8POUT-1	Control SCART 1 8Pin Level by using 8POUT-1 and 8POUT-2	H/L
60	OUT	8POUT-2	Control SCART 1 8Pin Level by using 8POUT-1 and 8POUT-2	Hi-z/L
61	-	NU	Not Used	-
62	-	NU	Not Used	-
63	-	NU	Not Used	-
64	-	NU	Not Used	-
65	-	NU	Not Used	-
66	OUT	C-POW-SW	Capstan Power Switching Signal	H/L
67	OUT	P-ON-H	Power On Signal at High	H
68	OUT	DRV-DATA	VFD Driver IC Control Data	H/L
69	OUT	DRV-STB	VFD Driver IC Chip Select Signal	H/L
70	OUT	DRV-CLK	VFD Driver IC Control Clock	H/L
71	OUT	IIC-BUS-SCL	IIC BUS Control Clock	H/L
72	IN/ OUT	IIC-BUS-SDA	IIC BUS Control Data	H/L
73	-	NU	Not Used	-
74	-	NU	Not Used	-
75	IN	DVD-POWER-MONITOR	DVD Power Monitor Signal (P-off="L", P-on="H")	H/L
76	OUT	C-CONT	Capstan Motor Control Signal	PWM
77	OUT	D-CONT	Drum Motor Control Signal	PWM
78	OUT	C-F/R	Capstan Motor FWD/REV Control Signal (FWD="L"/REV="H")	H/L
79	IN	S-REEL	Supply Reel Rotation Signal	PULSE
80	IN	T-REEL	Take Up Reel Rotation Signal	PULSE
81	OUT	LM-FWD/REV	Loading Motor Control Signal	H/L/ Hi-z
82	OUT	OUTPUT-SELECT	Output Select	H/L

Pin No.	IN/ OUT	Signal Name	Function	Active Level
83	OUT	AUDIO-MUTE-H	Audio Mute Control Signal (Mute = "H")	H
84	-	NU	Not Used	-
85	-	NU	Not Used	-
86	IN	A-MODE	Hi-Fi Tape Detection Signal	L
87	IN	C-FG	Capstan Motor Rotation Detection Pulse	PULSE
88	-	NU	Not Used	-
89	-	NU	Not Used	-
90	IN	D-PFG	Drum Motor Phase/Frequency Generator	PULSE
91	-	AMPVREF OUT	V-Ref for CTL AMP	-
92	-	AMPVREF in	V-Ref for CTL AMP	-
93	-	P80/C	P80/C Terminal	-
94	IN/ OUT	CTL (-)	Playback/Record Control Signal (-)	H/L
95	IN/ OUT	CTL (+)	Playback/Record Control Signal (+)	H/L
96	-	AMPC	CTL AMP Connected Terminal	-
97	-	CTL	To Monitor for CTL AMP Output	PULSE
98	-	AMPVcc	AMPVcc	-
99	-	AVcc	A/D Converter Power Input/ Standard Voltage Input	-
100	IN	AGC	IF AGC Comparator Signal	A/D

**Notes:**

Abbreviation for Active Level:

PWM -----Pulse Wide Modulation

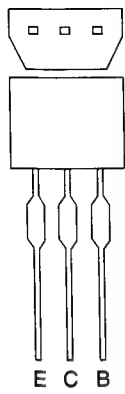
A/D-----Analog - Digital Converter



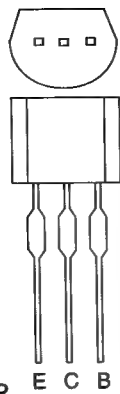
## IC612 ( FIP DRIVER )

Pin No.	IN/ OUT	Signal Name	Name Function
1	IN	FP-CLK	Clock Input
2	IN	FP-STB	Serial Interface Strobe
3	-	NU	Not Used
4	-	NU	Not Used
5	-	VSS	GND
6	-	VDD	Power Supply
7	OUT	a	Segment Output
8		b	
9		c	
10		d	
11		e	
12		f	
13		g	
14		h	
15	-	VEE	Pull Down Level
16	OUT	i	Segment Output
17	OUT	7G	Grid Output
18		6G	
19		5G	
20		4G	
21		3G	
22		2G	
23		1G	
24	-	VDD	Power Supply
25	-	VSS	GND
26	IN	OSC	Oscillator Input
27	-	NU	Not Used
28	IN	FP-DIN	Serial Data Input

# LEAD IDENTIFICATIONS



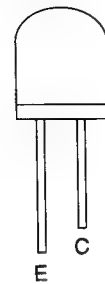
2SA1175(F,H,J)  
2SC2785(F,H,J)  
BA1F4M-T  
BN1F4M-T  
BN1L4M-T  
KRA103M  
KRC103M  
KTA1266(GR)  
KTA1267(GR,Y)  
KTC3199(BL,GR,Y)  
RN2204(TE4 F T)  
KTA1267-GR-AT/P  
KTA1267Y-AT/P  
KTC3199-(BL,GR,Y)-AT/P



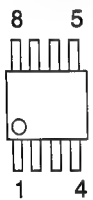
2SA1015-GR(TPE2)  
2SA1015-GR(TE2 F T)  
2SA1015-Y(TE2 F T)  
2SA1015-Y(TPE2)  
2SC1815-BL(TPE2)  
2SC1815-GR(TPE2)  
2SC1815-BL(TE2 F T)  
2SC1815-GR(TE2 F T)  
2SC1815-Y(TE2 F T)  
2SC1815-Y(TPE2)  
2SC2120-Y(TPE2)  
2SC2120-Y(TE2 F T)

2SC3266-Y(TPE2 F)  
2SC3266-Y(TPE2)  
2SA1020-Y(TE6 F M)  
2SA1020(Y)  
KTA1281(Y)  
KTA1281Y-AT/P  
KTC3203(Y)  
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KTC3205(Y)  
KTC3205-Y-AT/P

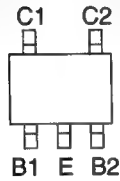
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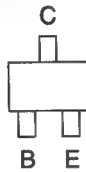
KIA4558P/P  
UTC4558  
RC4580IP



FMG4A T148  
RN1511(TE85R)



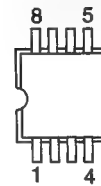
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KRC103S RTK  
KTC3875S-Y-RTK/P



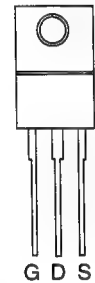
EL817A  
EL817B  
PS2561A-1(Q,W)



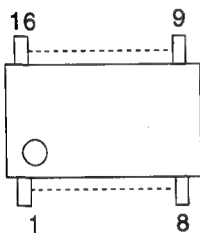
BR24L02F-WE2  
CAT24WC02WI-TE13



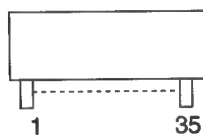
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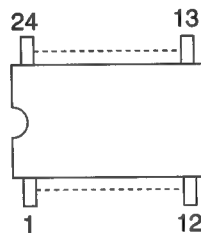
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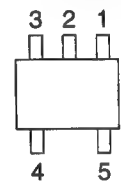
7-BT-298NYM



LC74793JM-TRM

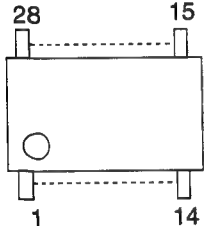


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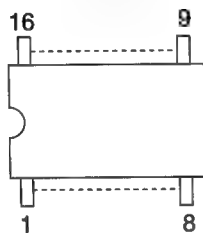


1: VREF  
2: GND  
3: VC  
4: VIN  
5: VOUT

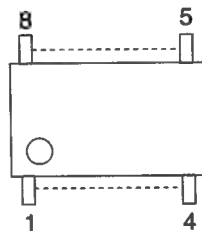
PT6313-S-TP(L)  
SC16313G



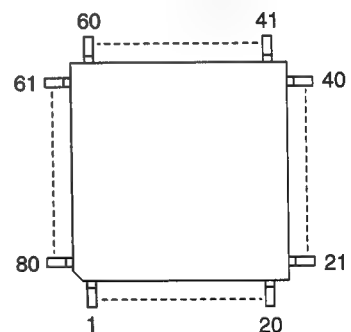
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CD4053BNSR  
TC4053BF(N)



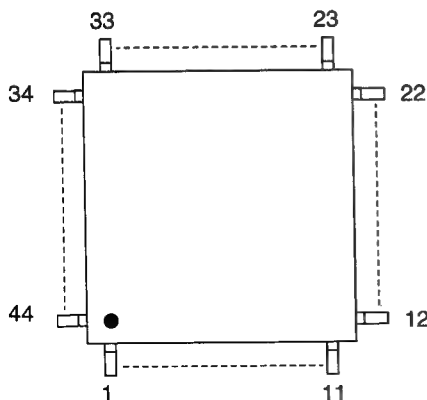
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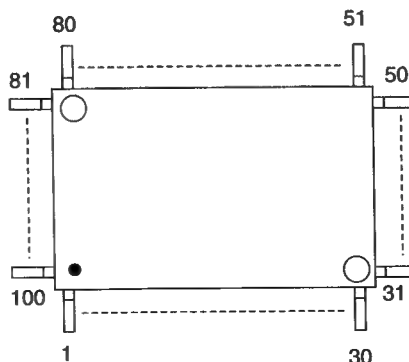
LA72648M-MPB-E



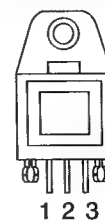
MSP3407G-QG-B8-V3



LA71750EM-MPB-E  
M3776AMCH-AA5GP



0C-0805T\*002  
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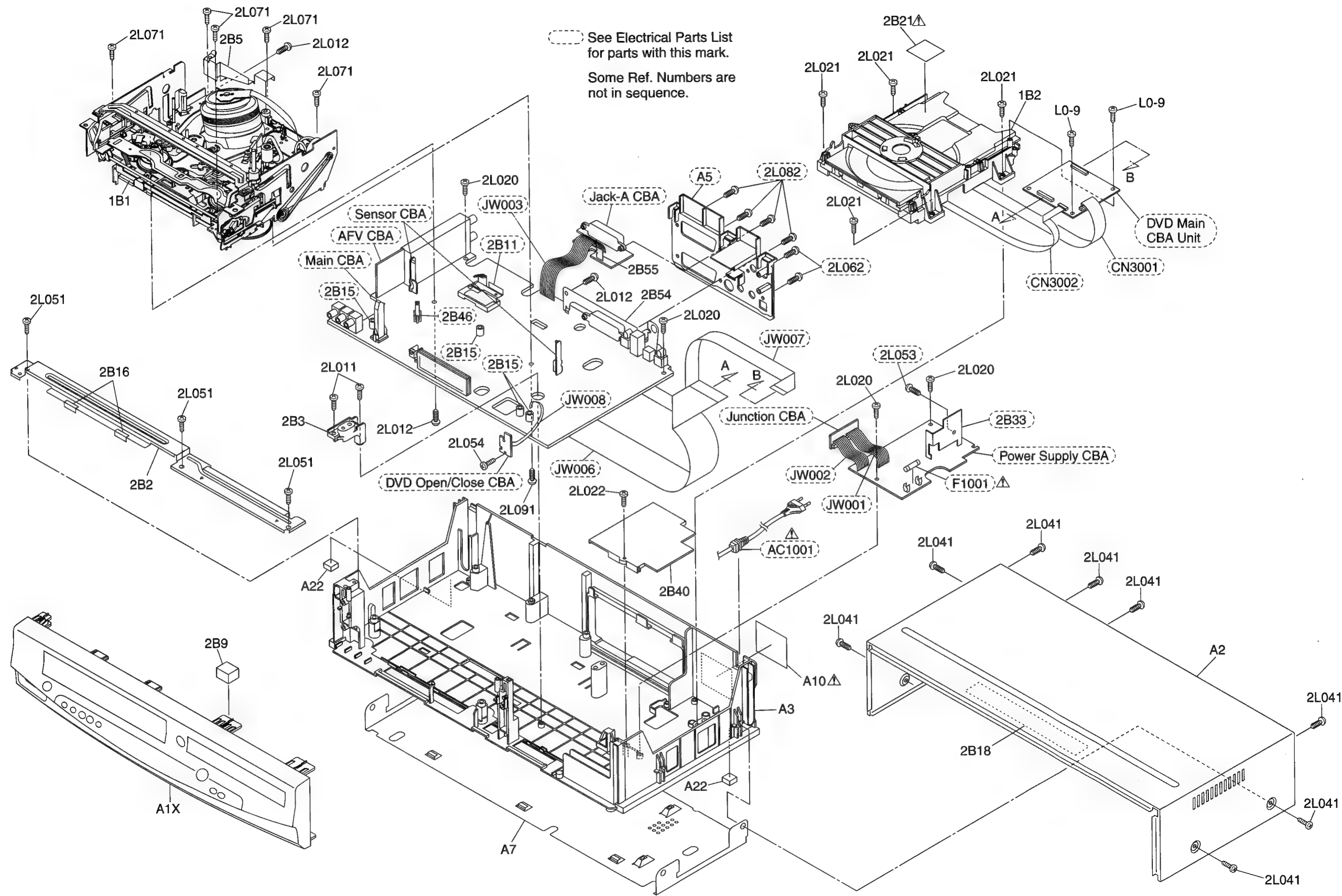


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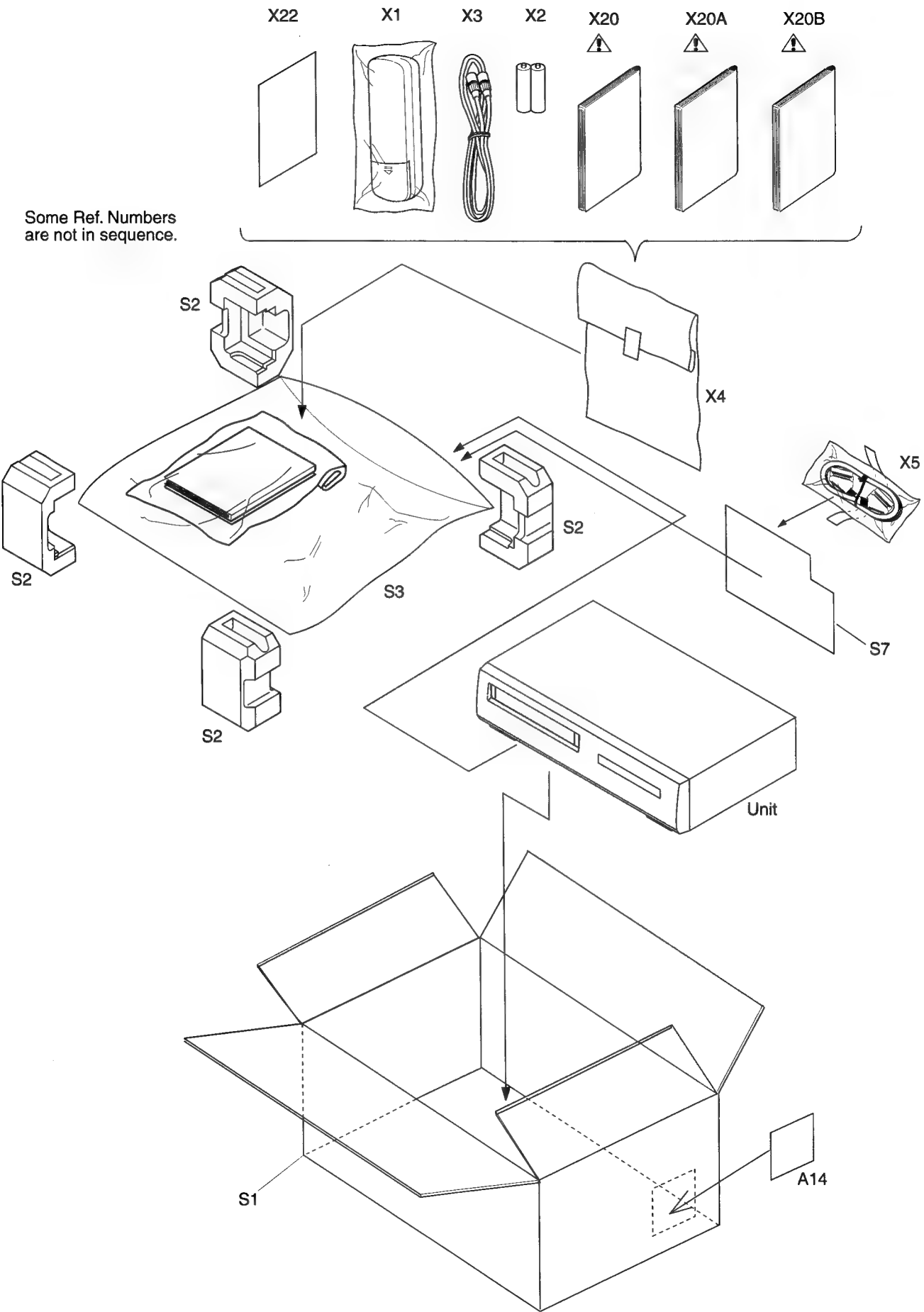
A: Anode  
K: Cathode  
E: Emitter  
C: Collector  
B: Base  
R: Reference  
S: Source  
G: Gate  
D: Drain

EXPLODED VIEWS


Cabinet






Packing



# MECHANICAL PARTS LIST

**PRODUCT SAFETY NOTE:** Products marked with a  have special characteristics important to safety. Before replacing any of these components, read carefully the product safety notice in this service manual. Don't degrade the safety of the product through improper servicing.

**NOTE:** Parts that are not assigned part numbers (-----) are not available.


Ref. No.	Mark	Description	Part No.
		RF CABLE CC1001020012010	WPZ0122LW001
X4		ACCESSORY BAG E5795ED	0VM416059
X5		21P CABLE(BYR SUPPLY) H9300ED	0VMN03276
X20 	A	OWNERS MANUAL(IT) H9900ED	1VMN20431
X20A 	B	OWNERS MANUAL(EN) H9909ED	1VMN20569
X20B 	B	OWNERS MANUAL(GE) H9909ED	1VMN20570
X22	A	SERVICE CENTER LIST HC2C0ED	0VMN03071B

## Comparison Chart of Models and Marks

Model	Mark
DPVR-6600	A
DPVR-6630	B

Ref. No.	Mark	Description	Part No.
A1X	A	FRONT ASSEMBLY H9900ED	1VM220324
A1X	B	FRONT ASSEMBLY H9901BD	1VM220477
A2		TOP CASE(D5 PAL FTZ) H9700ED	0VM101358
A3		CHASSIS H9900ED	1VM220317
A7		PANEL BOTTOM H9700ED	0VM204530
A10 	A	RATING LABEL(U) H9900ED	-----
A10 	B	RATING LABEL(U) H9909ED	-----
A14		LABEL SERIAL NO. HE240ED	-----
A14	A	BARCODE LABEL H9900ED	-----
A14	B	BAR CODE LABEL H9909ED	-----
A22		CHASSIS FOOT H79P9JD	0VM412315
1B1		DECK ASSEMBLY CZD014/VM25E0	N25E0FL
1B2		DVD MECHA E6160(FG LESS) N79F0JVM	N79F0JVM
2B2		TOP BRACKET H9700ED	0VM204531
2B3		RODER HOLDER H9600UD	0VM306676
2B5		SHEILD CYLINDER H9700ED	0VM306780
2B9		CUSHION HC460ED	0VM413251
2B16		TAPE HIMELON H9206JD	0VM413956
2B18		FIBER TOP CASE HC460ED	0VM412906
2B21 		LASER CAUTION LABEL H9900ED	-----
2B40		PARTITION PLATE H9700ED	0VM306765
2B54		PLATE GROUND(RCA) H9700ED	0VM306867
2B55		PLATE GROUND(21P) H9700ED	0VM416444
2L011		P-TIGHT SCREW 3X8 BIND +	GBMP3080
2L012		SCREW S-TIGHT M3X6 BIND HEAD+	GBMS3080
2L020		P-TIGHT SCREW 3X8 BIND +	GBMP3080
2L021		SCREW P-TIGHT 3X12 BIND HEAD+	GBMP3120
2L022		P-TIGHT SCREW 3X8 BIND +	GBMP3080
2L041		SCREW P-TIGHT 3X6 BIND HEAD+	GBCP3060
2L051		SCREW P-TIGHT M3X6 BIND HEAD+	GBMP3060
2L054		SCREW P-TIGHT M3X6 BIND HEAD+	GBMP3060
2L071		SCREW P-TIGHT M3X10 WASHER HEAD+	GCMP3100
2L091		SCREW P-TIGHT M3X8 BIND HEAD+	GBCP3080
L0-9		P-TIGHT SCREW 3X8 BIND +	GBMP3080
<b>PACKING</b>			
S1	A	GIFT BOX CARTON H9900ED	1VM320758
S1	B	GIFT BOX CARTON H9909ED	1VM320823
S2		STYROFOAM H9600UD	0VM204474
S3		UNIT BAG E5500UD	0VM411683
S7		21P PAD HC463FD	0VM413384
<b>ACCESSORIES</b>			
X1		REMOTE CONTROL UNIT 364/ CZF05DD	NB126ED
X2		DRY BATTERY R6P/2S or	XB0M451T0001
		DRY BATTERY ES-GR6M-C	XB0M571GLP01
X3		RF CORD PAL 1.2M or	WPZ0122LG001

# ELECTRICAL PARTS LIST

**PRODUCT SAFETY NOTE:** Products marked with a  have special characteristics important to safety. Before replacing any of these components, read carefully the product safety notice in this service manual. Don't degrade the safety of the product through improper servicing.

## NOTES:

- Parts that are not assigned part numbers (-----) are not available.
- Tolerance of Capacitors and Resistors are noted with the following symbols.

C.....±0.25%    D.....±0.5%    F.....±1%  
 G.....±2%    J.....±5%    K.....±10%  
 M.....±20%    N.....±30%    Z.....+80/-20%

## Comparison Chart of Models and Marks

Model	Mark
DPVR-6600	A
DPVR-6630	B

## DVD MAIN CBA UNIT

Ref. No.	Mark	Description	Part No.
	A	DVD MAIN CBA UNIT	N79GAJEP
	B	DVD MAIN CBA UNIT	N79GDJBP

## MCV CBA

Ref. No.	Description	Part No.
	MCV CBA Consists of the following	1VSA11145
	MAIN CBA (MCV-A) DVD OPEN/CLOSE CBA (MCV-C) SENSOR CBA	----- 1VSA10047

## MAIN CBA

Ref. No.	Description	Part No.
	MAIN CBA (MCV-A) Consists of the following	-----
<b>CAPACITORS</b>		
C056	ELECTROLYTIC CAP. 47µF/25V M or	CE1EMASDL470
	ELECTROLYTIC CAP. 47µF/25V M	CE1EMASTL470
C057	ELECTROLYTIC CAP. 10µF/16V M or	CE1CMASDL100
	ELECTROLYTIC CAP. 10µF/16V M	CE1CMASTL100
C058	ELECTROLYTIC CAP. 220µF/6.3V M H7	CE0KMASSL221
C059	ELECTROLYTIC CAP. 100µF/6.3V M or	CE0KMASDL101
	ELECTROLYTIC CAP. 100µF/6.3V M	CE0KMASTL101
C062	CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V or	CHD1JZ30F104
	CHIP CERAMIC CAP.(1608) F Z 0.1µF/25V or	CHD1EZ30F104
	CHIP CERAMIC CAP. FZ Z 0.1µF/50V	CHD1JZ3FZ104
C063	ELECTROLYTIC CAP. 47µF/16V M or	CE1CMASDL470
	ELECTROLYTIC CAP. 47µF/16V M	CE1CMASTL470
C104	ELECTROLYTIC CAP. 100µF/16V M or	CE1CMASDL101
	ELECTROLYTIC CAP. 100µF/16V M	CE1CMASTL101
C107	ELECTROLYTIC CAP. 470µF/6.3V M or	CE0KMASDL471
	ELECTROLYTIC CAP. 470µF/6.3V M	CE0KMASTL471
C109	CHIP CERAMIC CAP.(1608) CH J 470pF/ 50V or	CHD1JJ3CH471
	CHIP CERAMIC CAP. CG J 470pF/ 50V	CHD1JJ3CG471
C112	CHIP CERAMIC CAP.(1608) CH J 470pF/ 50V or	CHD1JJ3CH471
	CHIP CERAMIC CAP. CG J 470pF/ 50V	CHD1JJ3CG471
C113	CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V or	CHD1JZ30F104

Ref. No.	Description	Part No.
	CHIP CERAMIC CAP.(1608) F Z 0.1µF/25V or	CHD1EZ30F104
	CHIP CERAMIC CAP. FZ Z 0.1µF/50V	CHD1JZ3FZ104
C114	CHIP CERAMIC CAP.(1608) B K 1000pF/ 50V	CHD1JK30B102
C116	CHIP CERAMIC CAP. B K 2200pF/ 50V	CHD1JK30B222
C117	ELECTROLYTIC CAP. 1µF/50V M or	CE1JMASDL1R0
	ELECTROLYTIC CAP. 1µF/50V M	CE1JMASTL1R0
C118	CHIP CERAMIC CAP. B K 2200pF/ 50V	CHD1JK30B222
C121	ELECTROLYTIC CAP. 1µF/50V M H7	CE1JMAVSL1R0
C122	ELECTROLYTIC CAP. 1µF/50V M H7	CE1JMAVSL1R0
C123	ELECTROLYTIC CAP. 1µF/50V M H7	CE1JMAVSL1R0
C124	ELECTROLYTIC CAP. 470µF/6.3V M or	CE0KMASDL471
	ELECTROLYTIC CAP. 470µF/6.3V M	CE0KMASTL471
C125	ELECTROLYTIC CAP. 470µF/6.3V M or	CE0KMASDL471
	ELECTROLYTIC CAP. 470µF/6.3V M	CE0KMASTL471
C126	ELECTROLYTIC CAP. 470µF/6.3V M or	CE0KMASDL471
	ELECTROLYTIC CAP. 470µF/6.3V M	CE0KMASTL471
C127	ELECTROLYTIC CAP. 10µF/16V M or	CE1CMASDL100
	ELECTROLYTIC CAP. 10µF/16V M	CE1CMASTL100
C128	ELECTROLYTIC CAP. 22µF/6.3V M H7	CE0KMASSL220
C133	CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V or	CHD1JZ30F104
	CHIP CERAMIC CAP.(1608) F Z 0.1µF/25V or	CHD1EZ30F104
	CHIP CERAMIC CAP. FZ Z 0.1µF/50V	CHD1JZ3FZ104
C135	CHIP CERAMIC CAP.(1608) B K 0.01µF/50V	CHD1JK30B103
C136	ELECTROLYTIC CAP. 100µF/6.3V M H7	CE0KMASSL101
C251	ELECTROLYTIC CAP. 10µF/16V M H7	CE1CMAVSL100
C252	CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V or	CHD1JZ30F104
	CHIP CERAMIC CAP.(1608) F Z 0.1µF/25V or	CHD1EZ30F104
	CHIP CERAMIC CAP. FZ Z 0.1µF/50V	CHD1JZ3FZ104
C253	CHIP CERAMIC CAP.(1608) B K 1000pF/ 50V	CHD1JK30B102
C254	ELECTROLYTIC CAP. 1µF/50V M H7	CE1JMAVSL1R0
C301	CHIP CERAMIC CAP.(1608) B K 0.022µF/50V or	CHD1JK30B223
	CHIP CERAMIC CAP.(1608) B K 0.022µF/25V	CHD1EK30B223
C302	ELECTROLYTIC CAP. 1µF/50V M H7	CE1JMAVSL1R0
C303	CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V or	CHD1JZ30F104
	CHIP CERAMIC CAP.(1608) F Z 0.1µF/25V or	CHD1EZ30F104
	CHIP CERAMIC CAP. FZ Z 0.1µF/50V	CHD1JZ3FZ104
C305	ELECTROLYTIC CAP. 1µF/50V M H7	CE1JMAVSL1R0
C306	CHIP CERAMIC CAP.(1608) B K 0.047µF/50V or	CHD1JK30B473
	CHIP CERAMIC CAP.(1608) B K 0.047µF/25V	CHD1EK30B473
C307	CHIP CERAMIC CAP.(1608) B K 0.022µF/50V or	CHD1JK30B223
	CHIP CERAMIC CAP.(1608) B K 0.022µF/25V	CHD1EK30B223
C308	CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V or	CHD1JZ30F104
	CHIP CERAMIC CAP.(1608) F Z 0.1µF/25V or	CHD1EZ30F104
	CHIP CERAMIC CAP. FZ Z 0.1µF/50V	CHD1JZ3FZ104
C309	CHIP CERAMIC CAP.(1608) CH J 68pF/ 50V or	CHD1JJ3CH680
	CHIP CERAMIC CAP. CG J 68pF/ 50V	CHD1JJ3CG680
C310	CHIP CERAMIC CAP.(1608) CH J 68pF/ 50V or	CHD1JJ3CH680
	CHIP CERAMIC CAP. CG J 68pF/ 50V	CHD1JJ3CG680
C311	CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V or	CHD1JZ30F104
	CHIP CERAMIC CAP.(1608) F Z 0.1µF/25V or	CHD1EZ30F104
	CHIP CERAMIC CAP. FZ Z 0.1µF/50V	CHD1JZ3FZ104
C312	ELECTROLYTIC CAP. 10µF/16V M H7	CE1CMAVSL100
C313	ELECTROLYTIC CAP. 1µF/50V M H7	CE1JMAVSL1R0
C314	CHIP CERAMIC CAP.(1608) B K 0.01µF/50V	CHD1JK30B103
C315	CHIP CERAMIC CAP.(1608) B K 0.047µF/50V or	CHD1JK30B473
	CHIP CERAMIC CAP.(1608) B K 0.047µF/25V	CHD1EK30B473
C316	ELECTROLYTIC CAP. 1µF/50V M H7	CE1JMAVSL1R0
C317	CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V or	CHD1JZ30F104
	CHIP CERAMIC CAP.(1608) F Z 0.1µF/25V or	CHD1EZ30F104
	CHIP CERAMIC CAP. FZ Z 0.1µF/50V	CHD1JZ3FZ104
C319	CHIP CERAMIC CAP.(1608) CH J 68pF/ 50V or	CHD1JJ3CH680
	CHIP CERAMIC CAP. CG J 68pF/ 50V	CHD1JJ3CG680
C320	CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V or	CHD1JZ30F104
	CHIP CERAMIC CAP.(1608) F Z 0.1µF/25V or	CHD1EZ30F104

Ref. No.	Description	Part No.
	CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C321	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V or	CHD1JZ30F104
	CHIP CERAMIC CAP.(1608) F Z 0.1μF/25V or	CHD1EZ30F104
	CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C322	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V or	CHD1JZ30F104
	CHIP CERAMIC CAP.(1608) F Z 0.1μF/25V or	CHD1EZ30F104
	CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C323	CHIP CERAMIC CAP.(1608) CH J 68pF/ 50V or	CHD1J3CH680
	CHIP CERAMIC CAP. CG J 68pF/ 50V	CHD1J3CG680
C324	CHIP CERAMIC CAP.(1608) B K 0.01μF/50V	CHD1JK30B103
C325	CHIP CERAMIC CAP. B K 8200pF/ 50V	CHD1JK30B822
C326	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V or	CHD1JZ30F104
	CHIP CERAMIC CAP.(1608) F Z 0.1μF/25V or	CHD1EZ30F104
	CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C328	ELECTROLYTIC CAP. 47μF/6.3V M H7	CE0KMAVSL470
C329	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V or	CHD1JZ30F104
	CHIP CERAMIC CAP.(1608) F Z 0.1μF/25V or	CHD1EZ30F104
	CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C331	ELECTROLYTIC CAP. 47μF/6.3V M H7	CE0KMAVSL470
C333	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V or	CHD1JZ30F104
	CHIP CERAMIC CAP.(1608) F Z 0.1μF/25V or	CHD1EZ30F104
	CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C334	ELECTROLYTIC CAP. 1μF/50V M H7	CE1JMAVSL1R0
C335	ELECTROLYTIC CAP. 100μF/6.3V H7	CE0KMAVSL101
C336	CHIP CERAMIC CAP. CH J 220pF/ 50V or	CHD1J3CH221
	CHIP CERAMIC CAP. CG J 220pF/ 50V	CHD1J3CG221
C337	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V or	CHD1JZ30F104
	CHIP CERAMIC CAP.(1608) F Z 0.1μF/25V or	CHD1EZ30F104
	CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C339	CHIP CERAMIC CAP. CH J 120pF/ 50V or	CHD1J3CH121
	CHIP CERAMIC CAP. CG J 120pF/ 50V	CHD1J3CG121
C340	ELECTROLYTIC CAP. 1μF/50V M H7	CE1JMAVSL1R0
C341	CHIP CERAMIC CAP.(1608) CH D 10pF/ 50V or	CHD1JD3CH100
	CHIP CERAMIC CAP.(1608) CG D 10pF/ 50V	CHD1JD3CG100
C342	CHIP CERAMIC CAP.(1608) B K 1000pF/ 50V	CHD1JK30B102
C343	ELECTROLYTIC CAP. 10μF/16V M H7	CE1CMAVSL100
C344	ELECTROLYTIC CAP. 4.7μF/25V M NP H7	CP1EMAVSB4R7
C345	ELECTROLYTIC CAP. 0.47μF/50V M H7	CE1JMAVSLR47
C346	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V or	CHD1JZ30F104
	CHIP CERAMIC CAP.(1608) F Z 0.1μF/25V or	CHD1EZ30F104
	CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C347	CHIP CERAMIC CAP.(1608) B K 0.1μF/25V or	CHD1EK30B104
	CHIP CERAMIC CAP.(1608) B K 0.1μF/16V	CHD1CK30B104
C349	ELECTROLYTIC CAP. 0.47μF/50V M H7	CE1JMAVSLR47
C350	CERAMIC CAP.(AX) F Z 0.1μF/25V	CCA1JZTFZ104
C402	FILM CAP.(P) 0.018μF/50V J or	CMA1JJP00183
	FILM CAP.(P) 0.018μF/50V J	CA1J183MS029
C403	CERAMIC CAP. B K 470pF/ 100V	CCD2AKS0B471
C404	ELECTROLYTIC CAP. 220μF/6.3V M H7	CE0KMASSL221
C405	ELECTROLYTIC CAP. 47μF/6.3V M H7	CE0KMAVSL470
C407	CHIP CERAMIC CAP.(1608) B K 1000pF/ 50V	CHD1JK30B102
C408	CHIP CERAMIC CAP. B K 1800pF/ 50V	CHD1JK30B182
C409	CHIP CERAMIC CAP.(1608) CH J 33pF/ 50V or	CHD1J3CH330
	CHIP CERAMIC CAP. CG J 33pF/ 50V	CHD1J3CG330
C410	ELECTROLYTIC CAP. 10μF/16V M H7	CE1CMAVSL100
C411	CHIP CERAMIC CAP.(1608) B K 0.01μF/50V	CHD1JK30B103
C412	ELECTROLYTIC CAP. 33μF/6.3V M H7	CE0KMAVSL330
C413	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V or	CHD1JZ30F104
	CHIP CERAMIC CAP.(1608) F Z 0.1μF/25V or	CHD1EZ30F104
	CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C414	CHIP CERAMIC CAP.(1608) B K 0.022μF/50V or	CHD1JK30B223
	CHIP CERAMIC CAP.(1608) B K 0.022μF/25V	CHD1EK30B223
C415	ELECTROLYTIC CAP. 4.7μF/25V M H7	CE1EMAVSL4R7
C416	CHIP CERAMIC CAP.(1608) B K 4700pF/ 50V	CHD1JK30B472
C417	ELECTROLYTIC CAP. 22μF/6.3V M H7	CE0KMAVSL220
C418	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V or	CHD1JZ30F104
	CHIP CERAMIC CAP.(1608) F Z 0.1μF/25V or	CHD1EZ30F104

Ref. No.	Description	Part No.
	CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C419	CHIP CERAMIC CAP. CH J 220pF/ 50V or	CHD1J3CH221
	CHIP CERAMIC CAP. CG J 220pF/ 50V	CHD1J3CG221
C421	ELECTROLYTIC CAP. 47μF/6.3V M H7	CE0KMAVSL470
C451	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V or	CHD1JZ30F104
	CHIP CERAMIC CAP.(1608) F Z 0.1μF/25V or	CHD1EZ30F104
	CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C452	ELECTROLYTIC CAP. 10μF/16V M H7	CE1CMAVSL100
C453	ELECTROLYTIC CAP. 22μF/10V M H7	CE1AMAVSL220
C454	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V or	CHD1JZ30F104
	CHIP CERAMIC CAP.(1608) F Z 0.1μF/25V or	CHD1EZ30F104
	CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C455	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V or	CHD1JZ30F104
	CHIP CERAMIC CAP.(1608) F Z 0.1μF/25V or	CHD1EZ30F104
	CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C456	ELECTROLYTIC CAP. 10μF/16V M H7	CE1CMAVSL100
C457	ELECTROLYTIC CAP. 4.7μF/25V M H7	CE1EMAVSL4R7
C458	CHIP CERAMIC CAP.(1608) B K 0.01μF/50V	CHD1JK30B103
C461	CHIP CERAMIC CAP.(1608) B K 0.01μF/50V	CHD1JK30B103
C462	CHIP CERAMIC CAP.(1608) B K 4700pF/ 50V	CHD1JK30B472
C463	ELECTROLYTIC CAP. 22μF/10V M H7	CE1AMAVSL220
C464	CHIP CERAMIC CAP.(1608) B K 0.01μF/50V	CHD1JK30B103
C465	ELECTROLYTIC CAP. 10μF/16V M H7	CE1CMAVSL100
C466	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V or	CHD1JZ30F104
	CHIP CERAMIC CAP.(1608) F Z 0.1μF/25V or	CHD1EZ30F104
	CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C467	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V or	CHD1JZ30F104
	CHIP CERAMIC CAP.(1608) F Z 0.1μF/25V or	CHD1EZ30F104
	CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C468	ELECTROLYTIC CAP. 220μF/6.3V M H7	CE0KMAVSL221
C469	ELECTROLYTIC CAP. 22μF/10V M H7	CE1AMAVSL220
C470	CHIP CERAMIC CAP.(1608) B K 4700pF/ 50V	CHD1JK30B472
C471	CHIP CERAMIC CAP.(1608) B K 0.01μF/50V	CHD1JK30B103
C472	ELECTROLYTIC CAP. 4.7μF/25V M H7	CE1EMAVSL4R7
C473	ELECTROLYTIC CAP. 10μF/16V M H7	CE1CMAVSL100
C474	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V or	CHD1JZ30F104
	CHIP CERAMIC CAP.(1608) F Z 0.1μF/25V or	CHD1EZ30F104
	CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C475	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V or	CHD1JZ30F104
	CHIP CERAMIC CAP.(1608) F Z 0.1μF/25V or	CHD1EZ30F104
	CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C476	ELECTROLYTIC CAP. 22μF/6.3V M H7	CE0KMAVSL220
C477	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V or	CHD1JZ30F104
	CHIP CERAMIC CAP.(1608) F Z 0.1μF/25V or	CHD1EZ30F104
	CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C478	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V or	CHD1JZ30F104
	CHIP CERAMIC CAP.(1608) F Z 0.1μF/25V or	CHD1EZ30F104
	CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C479	ELECTROLYTIC CAP. 10μF/16V M H7	CE1CMAVSL100
C480	ELECTROLYTIC CAP. 4.7μF/25V M H7	CE1EMAVSL4R7
C481	ELECTROLYTIC CAP. 4.7μF/25V M H7	CE1EMAVSL4R7
C482	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V or	CHD1JZ30F104
	CHIP CERAMIC CAP.(1608) F Z 0.1μF/25V or	CHD1EZ30F104
	CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C483	ELECTROLYTIC CAP. 4.7μF/25V M H7	CE1EMAVSL4R7
C484	ELECTROLYTIC CAP. 4.7μF/25V M H7	CE1EMAVSL4R7
C485	ELECTROLYTIC CAP. 10μF/16V M H7	CE1CMAVSL100
C486	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V or	CHD1JZ30F104
	CHIP CERAMIC CAP.(1608) F Z 0.1μF/25V or	CHD1EZ30F104
	CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C487	ELECTROLYTIC CAP. 47μF/16V M H7	CE1CMAVSL470
C488	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V or	CHD1JZ30F104
	CHIP CERAMIC CAP.(1608) F Z 0.1μF/25V or	CHD1EZ30F104
	CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C502	CHIP CERAMIC CAP.(1608) B K 0.022μF/50V or	CHD1JK30B223
	CHIP CERAMIC CAP.(1608) B K 0.022μF/25V	CHD1EK30B223
C505	CHIP CERAMIC CAP.(1608) B K 0.01μF/50V	CHD1JK30B103



Ref. No.	Description	Part No.
C506	ELECTROLYTIC CAP. 220μF/6.3V M H7	CE0KMAVSL221
C507	CHIP CERAMIC CAP.(1608) B K 1000pF/ 50V	CHD1JK30B102
C508	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V or	CHD1JZ30F104
	CHIP CERAMIC CAP.(1608) F Z 0.1μF/25V or	CHD1EZ30F104
	CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C509	CHIP CERAMIC CAP.(1608) B K 1000pF/ 50V	CHD1JK30B102
C510	CHIP CERAMIC CAP.(1608) B K 4700pF/ 50V	CHD1JK30B472
C511	CHIP CERAMIC CAP.(1608) CH J 100pF/ 50V or	CHD1JJ3CH101
	CHIP CERAMIC CAP.(1608) CG J 100pF/ 50V	CHD1JJ3CG101
C512	CHIP CERAMIC CAP.(1608) B K 0.01μF/50V	CHD1JK30B103
C514	CHIP CERAMIC CAP. CH J 330pF/ 50V or	CHD1JJ3CH331
	CHIP CERAMIC CAP. CG J 330pF/ 50V	CHD1JJ3CG331
C515	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V or	CHD1JZ30F104
	CHIP CERAMIC CAP.(1608) F Z 0.1μF/25V or	CHD1EZ30F104
	CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C516	ELECTROLYTIC CAP. 22μF/6.3V M H7	CE0KMASSL220
C517	CHIP CERAMIC CAP.(1608) B K 0.022μF/50V or	CHD1JK30B223
	CHIP CERAMIC CAP.(1608) B K 0.022μF/25V	CHD1EK30B223
C518	ELECTROLYTIC CAP. 22μF/6.3V M H7	CE0KMASSL220
C519	CHIP CERAMIC CAP. CH J 560pF/ 50V or	CHD1JJ3CH561
	CHIP CERAMIC CAP. CG J 560pF/ 50V	CHD1JJ3CG561
C521	ELECTROLYTIC CAP. 22μF/6.3V M H7	CE0KMASSL220
C522	CHIP CERAMIC CAP.(1608) B K 0.01μF/50V	CHD1JK30B103
C524	CHIP CERAMIC CAP.(1608) B K 0.01μF/50V	CHD1JK30B103
C527	CERAMIC CAP.(AX) B K 100pF/ 50V	CCA1JKT0B101
C530	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V or	CHD1JZ30F104
	CHIP CERAMIC CAP.(1608) F Z 0.1μF/25V or	CHD1EZ30F104
	CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C531	CHIP CERAMIC CAP.(1608) B K 4700pF/ 50V	CHD1JK30B472
C533	CHIP CERAMIC CAP.(1608) B K 0.047μF/50V or	CHD1JK30B473
	CHIP CERAMIC CAP.(1608) B K 0.047μF/25V	CHD1EK30B473
C534	ELECTROLYTIC CAP. 47μF/6.3V M H7	CE0KMAVSL470
C535	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V or	CHD1JZ30F104
	CHIP CERAMIC CAP.(1608) F Z 0.1μF/25V or	CHD1EZ30F104
	CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C538	CHIP CERAMIC CAP. CH J 180pF/ 50V or	CHD1JJ3CH181
	CHIP CERAMIC CAP. CG J 180pF/ 50V	CHD1JJ3CG181
C539	CHIP CERAMIC CAP.(1608) B K 0.01μF/50V	CHD1JK30B103
C540	CHIP CERAMIC CAP.(1608) B K 4700pF/ 50V	CHD1JK30B472
C541	CHIP CERAMIC CAP. CH J 18pF/ 50V or	CHD1JJ3CH180
	CHIP CERAMIC CAP. CG J 18pF/ 50V	CHD1JJ3CG180
C542	CHIP CERAMIC CAP. CH J 18pF/ 50V or	CHD1JJ3CH180
	CHIP CERAMIC CAP. CG J 18pF/ 50V	CHD1JJ3CG180
C543	CHIP CERAMIC CAP.(1608) CH J 22pF/ 50V or	CHD1JJ3CH220
	CHIP CERAMIC CAP. CG J 22pF/ 50V	CHD1JJ3CG220
C544	CHIP CERAMIC CAP. CH J 18pF/ 50V or	CHD1JJ3CH180
	CHIP CERAMIC CAP. CG J 18pF/ 50V	CHD1JJ3CG180
C545	CHIP CERAMIC CAP.(1608) CH J 22pF/ 50V or	CHD1JJ3CH220
	CHIP CERAMIC CAP. CG J 22pF/ 50V	CHD1JJ3CG220
C546	CHIP CERAMIC CAP.(1608) CH J 22pF/ 50V or	CHD1JJ3CH220
	CHIP CERAMIC CAP. CG J 22pF/ 50V	CHD1JJ3CG220
C547	CHIP CERAMIC CAP.(1608) B K 0.01μF/50V	CHD1JK30B103
C548	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V or	CHD1JZ30F104
	CHIP CERAMIC CAP.(1608) F Z 0.1μF/25V or	CHD1EZ30F104
	CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C549	ELECTROLYTIC CAP. 1μF/50V M H7	CE1JMAVSL1R0
C550	ELECTROLYTIC CAP. 100μF/6.3V H7	CE0KMAVSL101
C553	ELECTROLYTIC CAP. 22μF/10V M H7	CE1AMAVSL220
C555	CHIP CERAMIC CAP.(1608) B K 0.1μF/25V or	CHD1EK30B104
	CHIP CERAMIC CAP.(1608) B K 0.1μF/16V	CHD1CK30B104
C612	CHIP CERAMIC CAP.(1608) B K 4700pF/ 50V	CHD1JK30B472
C614	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V or	CHD1JZ30F104
	CHIP CERAMIC CAP.(1608) F Z 0.1μF/25V or	CHD1EZ30F104
	CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C615	ELECTROLYTIC CAP. 100μF/6.3V M H7	CE0KMASSL101
C703	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V or	CHD1JZ30F104
	CHIP CERAMIC CAP.(1608) F Z 0.1μF/25V or	CHD1EZ30F104

Ref. No.	Description	Part No.
	CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C704	CERAMIC CAP.(AX) SL J 39pF/ 50V	CCA1JUTSL390
C709	CHIP CERAMIC CAP.(1608) B K 0.01μF/50V	CHD1JK30B103
C711	CHIP CERAMIC CAP.(1608) B K 0.01μF/50V	CHD1JK30B103
C712	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V or	CHD1JZ30F104
	CHIP CERAMIC CAP.(1608) F Z 0.1μF/25V or	CHD1EZ30F104
	CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C715	CHIP CERAMIC CAP. F Z 0.22μF/16V or	CHD1CZ30F224
	CHIP CERAMIC CAP. FZ Z 0.22μF/25V	CHD1EZ3FZ224
C716	CHIP CERAMIC CAP. F Z 0.22μF/16V or	CHD1CZ30F224
	CHIP CERAMIC CAP. FZ Z 0.22μF/25V	CHD1EZ3FZ224
C751	CHIP CERAMIC CAP.(1608) B K 0.01μF/50V	CHD1JK30B103
C752	ELECTROLYTIC CAP. 47μF/10V M or	CE1AMASDL470
	ELECTROLYTIC CAP. 47μF/10V M	CE1AMASTL470
C753	ELECTROLYTIC CAP. 4.7μF/50V M or	CE1JMASDL4R7
	ELECTROLYTIC CAP. 4.7μF/50V M	CE1JMASTL4R7
C754	ELECTROLYTIC CAP. 4.7μF/50V M H7	CE1JMASSL4R7
C755	CHIP CERAMIC CAP. B K 2200pF/ 50V	CHD1JK30B222
C756	CHIP CERAMIC CAP. B K 2200pF/ 50V	CHD1JK30B222
C757	ELECTROLYTIC CAP. 47μF/6.3V M H7	CE0KMASSL470
C758	CHIP CERAMIC CAP.(1608) B K 0.01μF/50V	CHD1JK30B103
C783	CHIP CERAMIC CAP.(1608) CH J 470pF/ 50V or	CHD1JJ3CH471
	CHIP CERAMIC CAP. CG J 470pF/ 50V	CHD1JJ3CG471
C784	CHIP CERAMIC CAP.(1608) CH J 470pF/ 50V or	CHD1JJ3CH471
	CHIP CERAMIC CAP. CG J 470pF/ 50V	CHD1JJ3CG471
C1036	CHIP CERAMIC CAP.(1608) B K 1μF/10V	CHD1AK30B105
C1039	CHIP CERAMIC CAP.(1608) B K 0.33μF/10V	CHD1AK30B334
C1040	ELECTROLYTIC CAP. 100μF/6.3V M or	CE0KMASDL101
	ELECTROLYTIC CAP. 100μF/6.3V M	CE0KMASTL101
C1042	ELECTROLYTIC CAP. 470μF/6.3V M or	CE0KMASDL471
	ELECTROLYTIC CAP. 470μF/6.3V M	CE0KMASTL471
C1050	CHIP CERAMIC CAP.(1608) B K 0.33μF/10V	CHD1AK30B334
C1051	CHIP CERAMIC CAP.(1608) B K 0.33μF/10V	CHD1AK30B334
C1056	CHIP CERAMIC CAP.(1608) B K 1000pF/ 50V	CHD1JK30B102
C1201	ELECTROLYTIC CAP. 10μF/16V M H7	CE1CMASSL100
C1202	ELECTROLYTIC CAP. 10μF/16V M H7	CE1CMASSL100
C1205	CHIP CERAMIC CAP. CH J 220pF/ 50V or	CHD1JJ3CH221
	CHIP CERAMIC CAP. CG J 220pF/ 50V	CHD1JJ3CG221
C1206	CHIP CERAMIC CAP. CH J 220pF/ 50V or	CHD1JJ3CH221
	CHIP CERAMIC CAP. CG J 220pF/ 50V	CHD1JJ3CG221
C1207	CHIP CERAMIC CAP.(1608) CH J 47pF/ 50V or	CHD1JJ3CH470
	CHIP CERAMIC CAP. CG J 47pF/ 50V	CHD1JJ3CG470
C1208	CHIP CERAMIC CAP.(1608) CH J 47pF/ 50V or	CHD1JJ3CH470
	CHIP CERAMIC CAP. CG J 47pF/ 50V	CHD1JJ3CG470
C1221	ELECTROLYTIC CAP. 10μF/16V M or	CE1CMASDL100
	ELECTROLYTIC CAP. 10μF/16V M	CE1CMASTL100
C1222	ELECTROLYTIC CAP. 10μF/16V M or	CE1CMASDL100
	ELECTROLYTIC CAP. 10μF/16V M	CE1CMASTL100
C1223	CHIP CERAMIC CAP.(1608) CH J 1000pF/ 50V or	CHD1JJ3CH102
	CHIP CERAMIC CAP. CG J 1000pF/ 50V	CHD1JJ3CG102
C1224	CHIP CERAMIC CAP.(1608) B K 1000pF/ 50V	CHD1JK30B102
C1245	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V or	CHD1JZ30F104
	CHIP CERAMIC CAP.(1608) F Z 0.1μF/25V or	CHD1EZ30F104
	CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C1246	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V or	CHD1JZ30F104
	CHIP CERAMIC CAP.(1608) F Z 0.1μF/25V or	CHD1EZ30F104
	CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C1247	ELECTROLYTIC CAP. 470μF/16V M or	CE1CMASDL471
	ELECTROLYTIC CAP. 470μF/16V M	CE1CMASTL471
C1249	ELECTROLYTIC CAP. 47μF/16V M or	CE1CMASDL470
	ELECTROLYTIC CAP. 47μF/16V M	CE1CMASTL470
C1352	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V or	CHD1JZ30F104
	CHIP CERAMIC CAP.(1608) F Z 0.1μF/25V or	CHD1EZ30F104
	CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C1353	CHIP CERAMIC CAP.(1608) B K 0.1μF/25V or	CHD1EK30B104
	CHIP CERAMIC CAP.(1608) B K 0.1μF/16V	CHD1CK30B104



Ref. No.	Description	Part No.
C1354	CHIP CERAMIC CAP.(1608) CH J 100pF/ 50V or	CHD1JJ3CH101
	CHIP CERAMIC CAP.(1608) CG J 100pF/ 50V	CHD1JJ3CG101
C1355	CHIP CERAMIC CAP. F Z 1μF/10V or	CHD1AZB0F105
	CHIP CERAMIC CAP. F Z 1μF/10V	CHD1AZ30F105
C1359	CHIP CERAMIC CAP. CH D 9pF/ 50V	CHD1JD3CH9R0
C1393	ELECTROLYTIC CAP. 470μF/6.3V M or	CE0KMASDL471
	ELECTROLYTIC CAP. 470μF/6.3V M	CE0KMASTL471
C1394	ELECTROLYTIC CAP. 47μF/6.3V M or	CE0KMASDL470
	ELECTROLYTIC CAP. 47μF/6.3V M	CE0KMASTL470
C1421	CHIP CERAMIC CAP.(1608) B K 0.01μF/50V	CHD1JK30B103
C1422	CHIP CERAMIC CAP.(1608) B K 0.1μF/25V or	CHD1EK30B104
	CHIP CERAMIC CAP.(1608) B K 0.1μF/16V	CHD1CK30B104
C1441	CHIP CERAMIC CAP.(1608) B K 0.33μF/10V	CHD1AK30B334
C1442	ELECTROLYTIC CAP. 470μF/6.3V M or	CE0KMASDL471
	ELECTROLYTIC CAP. 470μF/6.3V M	CE0KMASTL471
C1523	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V or	CHD1JZ30F104
	CHIP CERAMIC CAP.(1608) F Z 0.1μF/25V or	CHD1EZ30F104
	CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C1524	ELECTROLYTIC CAP. 100μF/6.3V M or	CE0KMASDL101
	ELECTROLYTIC CAP. 100μF/6.3V M	CE0KMASTL101
C1535	CHIP CERAMIC CAP.(1608) B K 0.01μF/50V	CHD1JK30B103
C1536	ELECTROLYTIC CAP. 22μF/6.3V M or	CE0KMASDL220
	ELECTROLYTIC CAP. 22μF/6.3V M	CE0KMASTL220
C2002	CHIP CERAMIC CAP.(1608) B K 1000pF/ 50V	CHD1JK30B102
C2004	ELECTROLYTIC CAP. 100μF/6.3V M H7	CE0KMASSL101
C2012	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V or	CHD1JZ30F104
	CHIP CERAMIC CAP.(1608) F Z 0.1μF/25V or	CHD1EZ30F104
	CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
<b>CONNECTORS</b>		
CN051	242 SERIES CONNECTOR 224202117W1	J322C17TG001
CN701	AFV PCB ASSEMBLY H9900ED	H9900AFV
<b>DIODES</b>		
D051	RECTIFIER DIODE 1N4005 or	NDQZ001N4005
	RECTIFIER DIODE 1N4005	NDWZ001N4005
D052	RECTIFIER DIODE 1N4005 or	NDQZ001N4005
	RECTIFIER DIODE 1N4005	NDWZ001N4005
D054	ZENER DIODE DZ-10BSAT265 or	NDTB00DZ10BS
	ZENER DIODE MTZJT-7710B	QDTB00MTZJ10
D056	ZENER DIODE DZ-18BSAT265 or	NDTB00DZ18BS
	ZENER DIODE MTZJT-7718B	QDTB00MTZJ18
D057	RECTIFIER DIODE 1N4005 or	NDQZ001N4005
	RECTIFIER DIODE 1N4005	NDWZ001N4005
D058	ZENER DIODE MTZJT-774.3C	QDTC00MTZJ4R3
D101	ZENER DIODE DZ-11BSAT265 or	NDTA00DZ11BS
	ZENER DIODE MTZJT-7711A	QDTA00MTZJ11
D102	ZENER DIODE DZ-11BSAT265 or	NDTA00DZ11BS
	ZENER DIODE MTZJT-7711A	QDTA00MTZJ11
D103	ZENER DIODE DZ-11BSAT265 or	NDTA00DZ11BS
	ZENER DIODE MTZJT-7711A	QDTA00MTZJ11
D104	ZENER DIODE DZ-11BSAT265 or	NDTA00DZ11BS
	ZENER DIODE MTZJT-7711A	QDTA00MTZJ11
D105	ZENER DIODE DZ-11BSAT265 or	NDTA00DZ11BS
	ZENER DIODE MTZJT-7711A	QDTA00MTZJ11
D106	ZENER DIODE DZ-11BSAT265 or	NDTA00DZ11BS
	ZENER DIODE MTZJT-7711A	QDTA00MTZJ11
D107	ZENER DIODE DZ-11BSAT265 or	NDTA00DZ11BS
	ZENER DIODE MTZJT-7711A	QDTA00MTZJ11
D108	ZENER DIODE DZ-11BSAT265 or	NDTA00DZ11BS
	ZENER DIODE MTZJT-7711A	QDTA00MTZJ11
D109	ZENER DIODE DZ-11BSAT265 or	NDTA00DZ11BS
	ZENER DIODE MTZJT-7711A	QDTA00MTZJ11
D110	ZENER DIODE DZ-11BSAT265 or	NDTA00DZ11BS
	ZENER DIODE MTZJT-7711A	QDTA00MTZJ11
D115	ZENER DIODE DZ-11BSAT265 or	NDTA00DZ11BS
	ZENER DIODE MTZJT-7711A	QDTA00MTZJ11
D118	ZENER DIODE DZ-11BSAT265 or	NDTA00DZ11BS
	ZENER DIODE MTZJT-7711A	QDTA00MTZJ11

Ref. No.	Description	Part No.
D119	ZENER DIODE DZ-11BSAT265 or	NDTA00DZ11BS
	ZENER DIODE MTZJT-7711A	QDTA00MTZJ11
D121	ZENER DIODE DZ-11BSAT265 or	NDTA00DZ11BS
	ZENER DIODE MTZJT-7711A	QDTA00MTZJ11
D301	SWITCHING DIODE 1N4148M or	NDT01N4148M
	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D502	LED(GREEN) 204-10GD/S957	NPQZ10GDS957
D503	LED(GREEN) 204-10GD/S957	NPQZ10GDS957
D505	LED(RED) 204HD/E	NPQZ00204HDE
D510	SWITCHING DIODE 1N4148M or	NDT01N4148M
	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D511	ZENER DIODE DZ-7.5BSAT265 or	NDTA00DZ7R5BS
	ZENER DIODE MTZJT-777.5A	QDTA00MTZJ7R5
D512	SWITCHING DIODE 1N4148M or	NDT01N4148M
	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D555	LED MIE-534A2 or	NPZZM1E534A2
	LED SIR-563ST3F P or	QPQPS1R563ST
	LED SIR-563ST3F Q	QPQQS1R563ST
D612	PCB JUMPER D0.6-P5.0	JW5.0T
D613	PCB JUMPER D0.6-P5.0	JW5.0T
D701	ZENER DIODE DZ-33BSDT265 or	NDTD00DZ33BS
	ZENER DIODE MTZJT-7733D	QDTD00MTZJ33
D1052	RECTIFIER DIODE 1N4005 or	NDQZ001N4005
	RECTIFIER DIODE 1N4005	NDWZ001N4005
D1053	RECTIFIER DIODE 1N4005 or	NDQZ001N4005
	RECTIFIER DIODE 1N4005	NDWZ001N4005
D1054	RECTIFIER DIODE 1N4005 or	NDQZ001N4005
	RECTIFIER DIODE 1N4005	NDWZ001N4005
D1057	RECTIFIER DIODE 1N4005 or	NDQZ001N4005
	RECTIFIER DIODE 1N4005	NDWZ001N4005
D1301	ZENER DIODE DZ-5.6BSAT265 or	NDTB00DZ5R6BS
	ZENER DIODE MTZJT-775.6B	QDTB00MTZJ5R6
<b>ICS</b>		
IC102	DRIVER FOR DVD MM1637XVBE	QSZBA0TMM102
IC301	IC Y/C/A LA71750EM-MPB-E	QSZBA0RSY020
IC451	IC HIFI LA72648M-MPB-E	QSZBA0RSY033
IC501	SYSCON IC M3776AMCH-AA5GP	QSZAB0RHT064
IC502	IC BR24L02F-WE2 or	QSZBA0TRM068
	IC CAT24WC02W-TE13	NSZBA0TBG007
IC611	VFD. 7-BT-298NYM	TVFD150FT014
IC612	VFD DRIVER/CONTROLLER IC PT6313-S-TP(L) or	NSZBA0TG2007
	VFD DRIVER IC SC16313G	NSZBA0T0S005
IC751	IC ANALOG MULTIPLEXER CD4053BNSR or	NSZBA0TTY093
	IC ANALOG MULTIPLEXERS CD4053BCSJX or	NSZBA0TF3071
	IC SWITCH TC4053BF(N)	QSMBA0STS002
IC1002	VOLTAGE REGULATOR PQ1LAX95MSPQ	QSZBA0TSH053
IC1003	VOLTAGE REGULATOR PQ1LAX95MSPQ	QSZBA0TSH053
IC1201	IC OP AMP KIA4558P/P or	NSZBA0SJY035
	IC OP AMP RC4580IP or	NSZBA0STY173
	IC OP AMP UTC4558	NSZBA0S2H001
IC1204	FIBER OPTIC TRANS.MODULE 0C-0805T*002 or	JWVHA00JD002
	OPTICAL TRANSMITTING MODULE JST1162 or	JWVHA00SLT01
	FIBER OPTIC TRANS.MODULE GPIFA513TZ0F	JWVHA00SH006
IC1403	DRIVER FOR DVD MM1636XWRE	QSZBA0TMM108
IC1404	IC ANALOG MULTIPLEXER CD4053BNSR or	NSZBA0TTY093
	IC ANALOG MULTIPLEXERS CD4053BCSJX or	NSZBA0TF3071
	IC SWITCH TC4053BF(N)	QSMBA0STS002
<b>COILS</b>		
L053	INDUCTOR(100μH K) LAP02TA101K	LLAXKATTU101
L101	BEAD CORE ASSEMBLY H9900ED	1VSA11420
L122	CHOKE COIL 47μH-K or	LLBD00PKV007
	CHOKE COIL 47μH-K or	LLBD00PKV005
	CHOKE COIL 47μH-K or	LLBD00PKT001
	FIXED INDUCTORS LGB0810T-470K	LLBD00PU6007

Ref. No.	Description	Part No.
L251	INDUCTOR 5.6μH-K-26T	LLAXKATTU5R6
L302	INDUCTOR(100μH K) LAP02TA101K	LLAXKATTU101
L402	INDUCTOR 47μH-K-5FT	LLARKBSTU470
L451	INDUCTOR 47μH-K-5FT	LLARKBSTU470
L452	PCB JUMPER D0.6-P5.0	JW5.0T
L501	INDUCTOR(100μH K) LAP02TA101K	LLAXKATTU101
L502	PCB JUMPER D0.6-P5.0	JW5.0T
L503	INDUCTOR 1.8μH-K-26T	LLAXKATTU1R8
L701	INDUCTOR 15μH-K-26T	LLAXKATTU150
L704	PCB JUMPER D0.6-P5.0	JW5.0T
L1251	INDUCTOR(0.47μH K) LAP02TA47K	LLAXKATTUR47
L1351	INDUCTOR(100μH K) LAP02TA101K	LLAXKATTU101
L1521	CHOKO COIL 47μH-K or	LLBD00PKV007
	CHOKO COIL 47μH-K or	LLBD00PKV005
	CHOKO COIL 47μH-K or	LLBD00PKT001
	FIXED INDUCTORS LGB0810T-470K	LLBD00PU6007
L2001	INDUCTOR(100μH K) LAP02TA101K	LLAXKATTU101
<b>TRANSISTORS</b>		
Q051	TRANSISTOR KTA1281-Y-AT/P or	NQVYKTA1281P
	TRANSISTOR 2SA1020-Y(TE6 F M) or	QQSY2SA1020F
	TRANSISTOR KTA1281(Y) or	NQSY0KTA1281
	TRANSISTOR 2SA1020(Y)	QQSY02SA1020
Q052	RES. BUILT-IN TRANSISTOR KRC103M or	NQSZ0KRC103M
	RES. BUILT-IN TRANSISTOR BA1F4M-T	QQSZ00BA1F4M
Q053	TRANSISTOR RN2204(Te4 F T) or	QQSZ0RN2204F
	RES. BUILT-IN TRANSISTOR BN1L4M-T	QQSZ00BN1L4M
Q054	RES. BUILT-IN TRANSISTOR KRC103M or	NQSZ0KRC103M
	RES. BUILT-IN TRANSISTOR BA1F4M-T	QQSZ00BA1F4M
Q055	TRANSISTOR KTC3199-Y-AT/P or	NQSYKTC3199P
	TRANSISTOR KTC3199-GR-AT/P or	NQS4KTC3199P
	TRANSISTOR 2SC1815-Y(Te2 F T) or	QQSY2SC1815F
	TRANSISTOR 2SC1815-GR(Te2 F T) or	QQS12SC1815F
	TRANSISTOR 2SC2785(J) or	QQSJ02SC2785
	TRANSISTOR 2SC2785(H) or	QQSH02SC2785
	TRANSISTOR 2SC2785(F) or	QQSF02SC2785
	TRANSISTOR KTC3199(Y) or	NQSY0KTC3199
	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR 2SC1815-Y(TPE2) or	QQSY02SC1815
	TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
Q056	TRANSISTOR KTC3205-Y-AT/P or	NQSYKTC3205P
	TRANSISTOR 2SC3266-Y(TPE2 F) or	QQSY2SC3266F
	TRANSISTOR KTC3205(Y) or	NQSY0KTC3205
	TRANSISTOR 2SC3266-Y(TPE2)	QQSY02SC3266
Q057	TRANSISTOR KTC3199-Y-AT/P or	NQSYKTC3199P
	TRANSISTOR KTC3199-GR-AT/P or	NQS4KTC3199P
	TRANSISTOR 2SC1815-Y(Te2 F T) or	QQSY2SC1815F
	TRANSISTOR 2SC1815-GR(Te2 F T) or	QQS12SC1815F
	TRANSISTOR 2SC2785(J) or	QQSJ02SC2785
	TRANSISTOR 2SC2785(H) or	QQSH02SC2785
	TRANSISTOR 2SC2785(F) or	QQSF02SC2785
	TRANSISTOR KTC3199(Y) or	NQSY0KTC3199
	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR 2SC1815-Y(TPE2) or	QQSY02SC1815
	TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
Q058	TRANSISTOR KTA1267-Y-AT/P or	NQSYKTA1267P
	TRANSISTOR KTA1267-GR-AT/P or	NQS1KTA1267P
	TRANSISTOR 2SA1015-Y(Te2 F T) or	QQSY2SA1015F
	TRANSISTOR 2SA1015-GR(Te2 F T) or	QQS12SA1015F
	TRANSISTOR 2SA1175(J) or	QQSJ02SA1175
	TRANSISTOR 2SA1175(H) or	QQSH02SA1175
	TRANSISTOR 2SA1175(F) or	QQSF02SA1175
	TRANSISTOR KTA1267(Y) or	NQSY0KTA1267
	TRANSISTOR KTA1267(GR) or	NQS10KTA1267
	TRANSISTOR 2SA1015-Y(TPE2) or	QQSY02SA1015
	TRANSISTOR 2SA1015-GR(TPE2)	QQS102SA1015
Q104	TRANSISTOR 2SA1015-GR(Te2 F T) or	QQS12SA1015F
	TRANSISTOR KTA1266(GR) or	NQS40KTA1266

Ref. No.	Description	Part No.
	TRANSISTOR 2SA1015-GR(TPE2)	QQS102SA1015
Q302	TRANSISTOR KTC3199-Y-AT/P or	NQSYKTC3199P
	TRANSISTOR KTC3199-GR-AT/P or	NQS4KTC3199P
	TRANSISTOR 2SC1815-Y(Te2 F T) or	QQSY2SC1815F
	TRANSISTOR 2SC1815-GR(Te2 F T) or	QQS12SC1815F
	TRANSISTOR 2SC2785(J) or	QQSJ02SC2785
	TRANSISTOR 2SC2785(H) or	QQSH02SC2785
	TRANSISTOR 2SC2785(F) or	QQSF02SC2785
	TRANSISTOR KTC3199(Y) or	NQSY0KTC3199
	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR 2SC1815-Y(TPE2) or	QQSY02SC1815
	TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
Q401	CHIP TRANSISTOR FMG4A T148 or	QQZ2000FMG4A
	CHIP TRANSISTOR RN1511(Te85R)	QQZ200RN1511
Q403	TRANSISTOR KTC3203-Y-AT/P or	NQSYKTC3203P
	TRANSISTOR 2SC2120-Y(Te2 F T) or	QQSY2SC2120F
	TRANSISTOR KTC3203(Y) or	NQSY0KTC3203
	TRANSISTOR 2SC2120-Y(TPE2)	QQSY02SC2120
Q404	TRANSISTOR 2SA1015-GR(Te2 F T) or	QQS12SA1015F
	TRANSISTOR KTA1266(GR) or	NQS40KTA1266
	TRANSISTOR 2SA1015-GR(TPE2)	QQS102SA1015
Q405	RES. BUILT-IN TRANSISTOR KRA103M or	NQSZ0KRA103M
	RES. BUILT-IN TRANSISTOR BN1F4M-T	QQSZ00BN1F4M
Q406	CHIP TRANSISTOR KTC3875S-Y-RTK/P	NQ1YKTC3875S
Q451	CHIP TRANSISTOR KRC103S RTK or	NQ120KRC103S
	CHIP TRANSISTOR FA1F4M-T1B	QQ8200FA1F4M
Q506	PHOTO TRANSISTOR PT204-6B-12 or	NPWZT2046B12
	PHOTO TRANSISTOR MID-32A22F	NPWZ1D32A22F
Q507	TRANSISTOR KTC3199-Y-AT/P or	NQSYKTC3199P
	TRANSISTOR KTC3199-GR-AT/P or	NQS4KTC3199P
	TRANSISTOR 2SC1815-Y(Te2 F T) or	QQSY2SC1815F
	TRANSISTOR 2SC1815-GR(Te2 F T) or	QQS12SC1815F
	TRANSISTOR 2SC2785(J) or	QQSJ02SC2785
	TRANSISTOR 2SC2785(H) or	QQSH02SC2785
	TRANSISTOR 2SC2785(F) or	QQSF02SC2785
	TRANSISTOR KTC3199(Y) or	NQSY0KTC3199
	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR 2SC1815-Y(TPE2) or	QQSY02SC1815
	TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
Q508	TRANSISTOR KTC3199-Y-AT/P or	NQSYKTC3199P
	TRANSISTOR KTC3199-GR-AT/P or	NQS4KTC3199P
	TRANSISTOR 2SC1815-Y(Te2 F T) or	QQSY2SC1815F
	TRANSISTOR 2SC1815-GR(Te2 F T) or	QQS12SC1815F
	TRANSISTOR 2SC2785(J) or	QQSJ02SC2785
	TRANSISTOR 2SC2785(H) or	QQSH02SC2785
	TRANSISTOR 2SC2785(F) or	QQSF02SC2785
	TRANSISTOR KTC3199(Y) or	NQSY0KTC3199
	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR 2SC1815-Y(TPE2) or	QQSY02SC1815
	TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
Q509	TRANSISTOR KTC3199-Y-AT/P or	NQSYKTC3199P
	TRANSISTOR KTC3199-GR-AT/P or	NQS4KTC3199P
	TRANSISTOR 2SC1815-Y(Te2 F T) or	QQSY2SC1815F
	TRANSISTOR 2SC1815-GR(Te2 F T) or	QQS12SC1815F
	TRANSISTOR 2SC2785(J) or	QQSJ02SC2785
	TRANSISTOR 2SC2785(H) or	QQSH02SC2785
	TRANSISTOR 2SC2785(F) or	QQSF02SC2785
	TRANSISTOR KTC3199(Y) or	NQSY0KTC3199
	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR 2SC1815-Y(TPE2) or	QQSY02SC1815
	TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
Q513	RES. BUILT-IN TRANSISTOR KRC103M or	NQSZ0KRC103M
	RES. BUILT-IN TRANSISTOR BA1F4M-T	QQSZ00BA1F4M
Q514	TRANSISTOR KTC3199-BL-AT/P or	NQS5KTC3199P
	TRANSISTOR 2SC1815-BL(Te2 F T) or	QQS22SC1815F
	TRANSISTOR KTC3199(BL) or	NQS50KTC3199
	TRANSISTOR 2SC1815-BL(TPE2)	QQS202SC1815

Ref. No.	Description	Part No.
Q515	TRANSISTOR KTC3199-BL-AT/P or	NQS5KTC3199P
	TRANSISTOR 2SC1815-BL(TE2 F T) or	QQS22SC1815F
	TRANSISTOR KTC3199(BL) or	NQS50KTC3199
	TRANSISTOR 2SC1815-BL(TPE2)	QQS202SC1815
Q753	TRANSISTOR KTC3199-Y-AT/P or	NQSYKTC3199P
	TRANSISTOR KTC3199-GR-AT/P or	NQS4KTC3199P
	TRANSISTOR 2SC1815-Y(TE2 F T) or	QQS12SC1815F
	TRANSISTOR 2SC1815-GR(TE2 F T) or	QQS12SC1815F
	TRANSISTOR 2SC2785(J) or	QQSJ02SC2785
	TRANSISTOR 2SC2785(H) or	QQSH02SC2785
	TRANSISTOR 2SC2785(F) or	QQSF02SC2785
	TRANSISTOR KTC3199(Y) or	NQSY0KTC3199
	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR 2SC1815-Y(TPE2) or	QQS102SC1815
	TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
Q754	TRANSISTOR KTC3199-Y-AT/P or	NQSYKTC3199P
	TRANSISTOR KTC3199-GR-AT/P or	NQS4KTC3199P
	TRANSISTOR 2SC1815-Y(TE2 F T) or	QQS12SC1815F
	TRANSISTOR 2SC2785(J) or	QQSJ02SC2785
	TRANSISTOR 2SC2785(H) or	QQSH02SC2785
	TRANSISTOR 2SC2785(F) or	QQSF02SC2785
	TRANSISTOR KTC3199(Y) or	NQSY0KTC3199
	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR 2SC1815-Y(TPE2) or	QQS102SC1815
	TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
Q1052	TRANSISTOR KTC3203-Y-AT/P or	NQSYKTC3203P
	TRANSISTOR 2SC2120-Y(TE2 F T) or	QQS12SC2120F
	TRANSISTOR KTC3203(Y) or	NQSY0KTC3203
	TRANSISTOR 2SC2120-Y(TPE2)	QQS102SC2120
Q1053	TRANSISTOR KTA1267-Y-AT/P or	NQSYKTA1267P
	TRANSISTOR KTA1267-GR-AT/P or	NQS1KTA1267P
	TRANSISTOR 2SA1015-Y(TE2 F T) or	QQS12SA1015F
	TRANSISTOR 2SA1015-GR(TE2 F T) or	QQS12SA1015F
	TRANSISTOR 2SA1175(J) or	QQSJ02SA1175
	TRANSISTOR 2SA1175(H) or	QQSH02SA1175
	TRANSISTOR 2SA1175(F) or	QQSF02SA1175
	TRANSISTOR KTA1267(Y) or	NQSY0KTA1267
	TRANSISTOR KTA1267(GR) or	NQS10KTA1267
	TRANSISTOR 2SA1015-Y(TPE2) or	QQS102SA1015
	TRANSISTOR 2SA1015-GR(TPE2)	QQS102SA1015
Q1054	TRANSISTOR KTC3199-Y-AT/P or	NQSYKTC3199P
	TRANSISTOR KTC3199-GR-AT/P or	NQS4KTC3199P
	TRANSISTOR 2SC1815-Y(TE2 F T) or	QQS12SC1815F
	TRANSISTOR 2SC2785(J) or	QQSJ02SC2785
	TRANSISTOR 2SC2785(H) or	QQSH02SC2785
	TRANSISTOR 2SC2785(F) or	QQSF02SC2785
	TRANSISTOR KTC3199(Y) or	NQSY0KTC3199
	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR 2SC1815-Y(TPE2) or	QQS102SC1815
	TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
Q1055	TRANSISTOR KTC3203-Y-AT/P or	NQSYKTC3203P
	TRANSISTOR 2SC2120-Y(TE2 F T) or	QQS12SC2120F
	TRANSISTOR KTC3203(Y) or	NQSY0KTC3203
	TRANSISTOR 2SC2120-Y(TPE2)	QQS102SC2120
Q1204	TRANSISTOR 2SA1015-GR(TE2 F T) or	QQS12SA1015F
	TRANSISTOR KTA1266(GR) or	NQS40KTA1266
	TRANSISTOR 2SA1015-GR(TPE2)	QQS102SA1015
Q1351	TRANSISTOR KTC3199-Y-AT/P or	NQSYKTC3199P
	TRANSISTOR KTC3199-GR-AT/P or	NQS4KTC3199P
	TRANSISTOR 2SC1815-Y(TE2 F T) or	QQS12SC1815F
	TRANSISTOR 2SC1815-GR(TE2 F T) or	QQS12SC1815F
	TRANSISTOR 2SC2785(J) or	QQSJ02SC2785
	TRANSISTOR 2SC2785(H) or	QQSH02SC2785
	TRANSISTOR 2SC2785(F) or	QQSF02SC2785
	TRANSISTOR KTC3199(Y) or	NQSY0KTC3199

Ref. No.	Description	Part No.
	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR 2SC1815-Y(TPE2) or	QQS102SC1815
	TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
Q1352	TRANSISTOR KTC3199-Y-AT/P or	NQSYKTC3199P
	TRANSISTOR KTC3199-GR-AT/P or	NQS4KTC3199P
	TRANSISTOR 2SC1815-Y(TE2 F T) or	QQS12SC1815F
	TRANSISTOR 2SC1815-GR(TE2 F T) or	QQS12SC1815F
	TRANSISTOR 2SC2785(J) or	QQSJ02SC2785
	TRANSISTOR 2SC2785(H) or	QQSH02SC2785
	TRANSISTOR 2SC2785(F) or	QQSF02SC2785
	TRANSISTOR KTC3199(Y) or	NQSY0KTC3199
	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR 2SC1815-Y(TPE2) or	QQS102SC1815
	TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
Q1502	CHIP TRANSISTOR KRC103S RTK or	NQ120KRC103S
	CHIP TRANSISTOR FA1F4M-T1B	QQ8200FA1F4M
Q1503	CHIP TRANSISTOR KTC3875S-Y-RTK/P	NQ1YKTC3875S
<b>RESISTORS</b>		
R050	CHIP RES.(1608) 1/10W J 3.9k $\Omega$	RRXAJR5Z0392
R051	CHIP RES.(1608) 1/10W J 47k $\Omega$	RRXAJR5Z0473
R052	CARBON RES. 1/4W J 680 $\Omega$	RCX4JATZ0681
R053	CARBON RES. 1/4W J 680 $\Omega$	RCX4JATZ0681
R054	CHIP RES.(1608) 1/10W J 22k $\Omega$	RRXAJR5Z0223
R055	CARBON RES. 1/4W J 10k $\Omega$	RCX4JATZ0103
R056	CHIP RES.(1608) 1/10W J 1 $\Omega$	RRXAJR5Z01R0
R058	CARBON RES. 1/4W J 1.2k $\Omega$	RCX4JATZ0122
R059	CARBON RES. 1/4W J 1.2k $\Omega$	RCX4JATZ0122
R060	CARBON RES. 1/4W J 1.2k $\Omega$	RCX4JATZ0122
R061	CARBON RES. 1/4W J 8.2k $\Omega$	RCX4JATZ0822
R062	CHIP RES.(1608) 1/10W J 180 $\Omega$	RRXAJR5Z0181
R063	CHIP RES.(1608) 1/10W J 47k $\Omega$	RRXAJR5Z0473
R064	CARBON RES. 1/4W J 8.2k $\Omega$	RCX4JATZ0822
R065	CHIP RES.(1608) 1/10W J 4.7k $\Omega$	RRXAJR5Z0472
R067	CHIP RES.(1608) 1/10W J 470 $\Omega$	RRXAJR5Z0471
R070	CARBON RES. 1/6W J 4.7k $\Omega$ or	RCX6JATZ0472
	CARBON RES. 1/4W J 4.7k $\Omega$	RCX4JATZ0472
R072	CARBON RES. 1/6W J 0.47 $\Omega$ or	RCX6JATZ0R47
	CARBON RES. 1/4W J 0.47 $\Omega$	RCX4JATZ0R47
R112	CHIP RES.(1608) 1/10W J 220 $\Omega$	RRXAJR5Z0221
R113	CARBON RES. 1/4W J 680 $\Omega$	RCX4JATZ0681
R116	CARBON RES. 1/4W J 560 $\Omega$	RCX4JATZ0561
R119	CARBON RES. 1/4W J 68 $\Omega$	RCX4JATZ0680
R121	CARBON RES. 1/6W J 15k $\Omega$ or	RCX6JATZ0153
	CARBON RES. 1/4W J 15k $\Omega$	RCX4JATZ0153
R122	CHIP RES.(1608) 1/10W J 10k $\Omega$	RRXAJR5Z0103
R124	CARBON RES. 1/6W J 4.7k $\Omega$ or	RCX6JATZ0472
	CARBON RES. 1/4W J 4.7k $\Omega$	RCX4JATZ0472
R128	CHIP RES.(1608) 1/10W J 75 $\Omega$	RRXAJR5Z0750
R129	CARBON RES. 1/4W J 470 $\Omega$	RCX4JATZ0471
R130	CARBON RES. 1/6W J 4.7k $\Omega$ or	RCX6JATZ0472
	CARBON RES. 1/4W J 4.7k $\Omega$	RCX4JATZ0472
R131	CARBON RES. 1/4W J 470 $\Omega$	RCX4JATZ0471
R132	CHIP RES. 1/10W F 160 $\Omega$ or	RRXAFR5H1600
	CHIP RES. 1/10W F 160 $\Omega$	RRXAFR5Z1600
R133	CHIP RES. 1/10W F 160 $\Omega$ or	RRXAFR5H1600
	CHIP RES. 1/10W F 160 $\Omega$	RRXAFR5Z1600
R134	CHIP RES. 1/10W F 160 $\Omega$ or	RRXAFR5H1600
	CHIP RES. 1/10W F 160 $\Omega$	RRXAFR5Z1600
R135	CHIP RES.(1608) 1/10W J 2.2k $\Omega$	RRXAJR5Z0222
R136	CARBON RES. 1/4W J 75 $\Omega$	RCX4JATZ0750
R137	CARBON RES. 1/4W J 75 $\Omega$	RCX4JATZ0750
R138	CARBON RES. 1/4W J 75 $\Omega$	RCX4JATZ0750
R140	CHIP RES.(1608) 1/10W J 22k $\Omega$	RRXAJR5Z0223
R251	CHIP RES.(1608) 1/10W J 39k $\Omega$	RRXAJR5Z0393
R252	CHIP RES.(1608) 1/10W J 2.2k $\Omega$	RRXAJR5Z0222
R301	CHIP RES.(1608) 1/10W J 1.2k $\Omega$	RRXAJR5Z0122
R303	CHIP RES.(1608) 1/10W J 5.6k $\Omega$	RRXAJR5Z0562

Ref. No.	Description	Part No.
R305	CHIP RES.(1608) 1/10W J 10k Ω	RRXAJR5Z0103
R306	CHIP RES.(1608) 1/10W J 5.6M Ω	RRXAJR5Z0565
R307	CARBON RES. 1/6W J 33 Ω or	RCX6JATZ0330
	CARBON RES. 1/4W J 33 Ω	RCX4JATZ0330
R310	CARBON RES. 1/6W J 33 Ω or	RCX6JATZ0330
	CARBON RES. 1/4W J 33 Ω	RCX4JATZ0330
R311	CHIP RES.(1608) 1/10W J 75 Ω	RRXAJR5Z0750
R314	CHIP RES.(1608) 1/10W J 3.9k Ω	RRXAJR5Z0392
R316	CHIP RES.(1608) 1/10W J 1.8k Ω	RRXAJR5Z0182
R319	CHIP RES.(1608) 1/10W J 1k Ω	RRXAJR5Z0102
R320	CHIP RES.(1608) 1/10W J 47k Ω	RRXAJR5Z0473
R321	CHIP RES.(1608) 1/10W J 470 Ω	RRXAJR5Z0471
R322	CHIP RES.(1608) 1/10W J 10k Ω	RRXAJR5Z0103
R323	CHIP RES.(1608) 1/10W J 1.2k Ω	RRXAJR5Z0122
R324	CHIP RES.(1608) 1/10W J 1k Ω	RRXAJR5Z0102
R325	CHIP RES.(1608) 1/10W J 1.2k Ω	RRXAJR5Z0122
R326	CHIP RES.(1608) 1/10W J 4.7k Ω	RRXAJR5Z0472
R327	CHIP RES.(1608) 1/10W J 6.8k Ω	RRXAJR5Z0682
R328	CHIP RES.(1608) 1/10W J 1k Ω	RRXAJR5Z0102
R330	CHIP RES.(1608) 1/10W J 2.2k Ω	RRXAJR5Z0222
R331	CHIP RES.(1608) 1/10W J 18k Ω	RRXAJR5Z0183
R332	CHIP RES.(1608) 1/10W J 10k Ω	RRXAJR5Z0103
R333	CHIP RES.(1608) 1/10W J 18k Ω	RRXAJR5Z0183
R334	CHIP RES.(1608) 1/10W J 10k Ω	RRXAJR5Z0103
R335	CHIP RES.(1608) 1/10W J 100 Ω	RRXAJR5Z0101
R336	CHIP RES.(1608) 1/10W J 4.7k Ω	RRXAJR5Z0472
R337	CHIP RES.(1608) 1/10W J 6.8k Ω	RRXAJR5Z0682
R341	CHIP RES.(1608) 1/10W J 33 Ω	RRXAJR5Z0330
R401	CARBON RES. 1/4W J 820 Ω	RCX4JATZ0821
R402	CARBON RES. 1/6W J 100 Ω or	RCX6JATZ0101
	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R405	CHIP RES.(1608) 1/10W J 47k Ω	RRXAJR5Z0473
R406	CHIP RES.(1608) 1/10W J 22k Ω	RRXAJR5Z0223
R407	CHIP RES.(1608) 1/10W J 5.6k Ω	RRXAJR5Z0562
R408	CHIP RES.(1608) 1/10W J 12k Ω	RRXAJR5Z0123
R409	CHIP RES.(1608) 1/10W J 5.6k Ω	RRXAJR5Z0562
R410	CHIP RES.(1608) 1/10W J 1k Ω	RRXAJR5Z0102
R411	CHIP RES.(1608) 1/10W J 27k Ω	RRXAJR5Z0273
R412	CHIP RES.(1608) 1/10W J 120 Ω	RRXAJR5Z0121
R413	CHIP RES.(1608) 1/10W J 330k Ω	RRXAJR5Z0334
R414	CHIP RES.(1608) 1/10W J 12k Ω	RRXAJR5Z0123
R415	CHIP RES.(1608) 1/10W J 1.8k Ω	RRXAJR5Z0182
R416	CHIP RES.(1608) 1/10W J 560 Ω	RRXAJR5Z0561
R417	CHIP RES.(1608) 1/10W J 2.2k Ω	RRXAJR5Z0222
R418	CHIP RES.(1608) 1/10W J 12k Ω	RRXAJR5Z0123
R419	CHIP RES.(1608) 1/10W J 10k Ω	RRXAJR5Z0103
R420	CHIP RES.(1608) 1/10W J 4.7k Ω	RRXAJR5Z0472
R421	CHIP RES.(1608) 1/10W J 4.7k Ω	RRXAJR5Z0472
R430	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
R431	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
R451	CHIP RES.(1608) 1/10W J 8.2k Ω	RRXAJR5Z0822
R452	CHIP RES.(1608) 1/10W J 39k Ω	RRXAJR5Z0393
R453	CHIP RES.(1608) 1/10W J 5.6k Ω	RRXAJR5Z0562
R454	CHIP RES.(1608) 1/10W J 39k Ω	RRXAJR5Z0393
R455	CHIP RES.(1608) 1/10W J 5.6k Ω	RRXAJR5Z0562
R456	CHIP RES.(1608) 1/10W J 39k Ω	RRXAJR5Z0393
R457	CHIP RES.(1608) 1/10W J 5.6k Ω	RRXAJR5Z0562
R458	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
R459	CHIP RES.(1608) 1/10W J 39k Ω	RRXAJR5Z0393
R460	CHIP RES.(1608) 1/10W J 5.6k Ω	RRXAJR5Z0562
R461	CHIP RES.(1608) 1/10W J 47k Ω	RRXAJR5Z0473
R462	CHIP RES.(1608) 1/10W J 10k Ω	RRXAJR5Z0103
R463	CHIP RES.(1608) 1/10W J 470 Ω	RRXAJR5Z0471
R464	CHIP RES.(1608) 1/10W J 3.3k Ω	RRXAJR5Z0332
R465	CHIP RES.(1608) 1/10W J 8.2k Ω	RRXAJR5Z0822
R466	CHIP RES.(1608) 1/10W J 8.2k Ω	RRXAJR5Z0822
R467	CHIP RES.(1608) 1/10W J 5.6k Ω	RRXAJR5Z0562

Ref. No.	Description	Part No.
R468	CHIP RES.(1608) 1/10W J 5.6k Ω	RRXAJR5Z0562
R469	CHIP RES.(1608) 1/10W J 39k Ω	RRXAJR5Z0393
R470	CHIP RES.(1608) 1/10W J 39k Ω	RRXAJR5Z0393
R471	CHIP RES.(1608) 1/10W J 39k Ω	RRXAJR5Z0393
R472	CHIP RES.(1608) 1/10W J 5.6k Ω	RRXAJR5Z0562
R473	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
R474	CHIP RES.(1608) 1/10W J 5.6k Ω	RRXAJR5Z0562
R475	CHIP RES.(1608) 1/10W J 47k Ω	RRXAJR5Z0473
R476	CHIP RES.(1608) 1/10W J 150 Ω	RRXAJR5Z0151
R477	CHIP RES.(1608) 1/10W J 150 Ω	RRXAJR5Z0151
R478	CHIP RES.(1608) 1/10W J 39k Ω	RRXAJR5Z0393
R479	CHIP RES.(1608) 1/10W J 33 Ω	RRXAJR5Z0330
R480	CHIP RES.(1608) 1/10W J 100 Ω	RRXAJR5Z0101
R481	CHIP RES.(1608) 1/10W J 33 Ω	RRXAJR5Z0330
R482	CHIP RES.(1608) 1/10W J 100 Ω	RRXAJR5Z0101
R483	CHIP RES.(1608) 1/10W J 22k Ω	RRXAJR5Z0223
R484	CHIP RES.(1608) 1/10W J 6.8k Ω	RRXAJR5Z0682
R501	CHIP RES.(1608) 1/10W J 1.8k Ω	RRXAJR5Z0182
R502	CHIP RES.(1608) 1/10W J 1k Ω	RRXAJR5Z0102
R503	CHIP RES.(1608) 1/10W J 3.9k Ω	RRXAJR5Z0392
R504	CHIP RES.(1608) 1/10W J 3.9k Ω	RRXAJR5Z0392
R507	CHIP RES.(1608) 1/10W J 1k Ω	RRXAJR5Z0102
R509	CHIP RES.(1608) 1/10W J 180 Ω	RRXAJR5Z0181
R511	CARBON RES. 1/6W G 3.6k Ω or	RCX6GATZ0362
	CARBON RES. 1/4W G 3.6k Ω	RCX4GATZ0362
R512	CHIP RES.(1608) 1/10W J 68k Ω	RRXAJR5Z0683
R513	CHIP RES.(1608) 1/10W J 33k Ω	RRXAJR5Z0333
R514	CARBON RES. 1/6W G 10k Ω or	RCX6GATZ0103
	CARBON RES. 1/4W G 10k Ω	RCX4GATZ0103
R516	CARBON RES. 1/6W G 470 Ω or	RCX6GATZ0471
	CARBON RES. 1/4W G 470 Ω	RCX4GATZ0471
R517	CARBON RES. 1/4W J 270 Ω	RCX4JATZ0271
R519	CARBON RES. 1/6W G 22k Ω or	RCX6GATZ0223
	CARBON RES. 1/4W G 22k Ω	RCX4GATZ0223
R523	CARBON RES. 1/6W G 1.5k Ω or	RCX6GATZ0152
	CARBON RES. 1/4W G 1.5k Ω	RCX4GATZ0152
R525	CARBON RES. 1/6W J 390k Ω or	RCX6JATZ0394
	CARBON RES. 1/4W J 390k Ω	RCX4JATZ0394
R526	CHIP RES.(1608) 1/10W J 390k Ω	RRXAJR5Z0394
R527	CARBON RES. 1/6W J 330 Ω or	RCX6JATZ0331
	CARBON RES. 1/4W J 330 Ω	RCX4JATZ0331
R528	CARBON RES. 1/6W G 4.7k Ω or	RCX6GATZ0472
	CARBON RES. 1/4W G 4.7k Ω	RCX4GATZ0472
R529	CHIP RES.(1608) 1/10W J 3.9k Ω	RRXAJR5Z0392
R530	CARBON RES. 1/4W J 270 Ω	RCX4JATZ0271
R531	CHIP RES.(1608) 1/10W J 3.9k Ω	RRXAJR5Z0392
R532	CARBON RES. 1/4W J 270 Ω	RCX4JATZ0271
R533	CHIP RES.(1608) 1/10W J 3.9k Ω	RRXAJR5Z0392
R536	CHIP RES.(1608) 1/10W J 1.8k Ω	RRXAJR5Z0182
R537	CHIP RES.(1608) 1/10W J 680 Ω	RRXAJR5Z0681
R538	CHIP RES.(1608) 1/10W J 1.5k Ω	RRXAJR5Z0152
R539	CHIP RES.(1608) 1/10W J 10k Ω	RRXAJR5Z0103
R540	CHIP RES.(1608) 1/10W J 10k Ω	RRXAJR5Z0103
R541	CHIP RES.(1608) 1/10W J 18k Ω	RRXAJR5Z0183
R542	CHIP RES.(1608) 1/10W J 1k Ω	RRXAJR5Z0102
R543	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R544	CHIP RES.(1608) 1/10W J 10k Ω	RRXAJR5Z0103
R545	CHIP RES.(1608) 1/10W J 10k Ω	RRXAJR5Z0103
R546	CHIP RES.(1608) 1/10W J 1k Ω	RRXAJR5Z0102
R548	CHIP RES.(1608) 1/10W J 10k Ω	RRXAJR5Z0103
R550	CHIP RES.(1608) 1/10W J 10k Ω	RRXAJR5Z0103
R552	CHIP RES.(1608) 1/10W J 10k Ω	RRXAJR5Z0103
R558	CHIP RES.(1608) 1/10W J 10k Ω	RRXAJR5Z0103
R560	CHIP RES.(1608) 1/10W J 10k Ω	RRXAJR5Z0103
R562	CHIP RES.(1608) 1/10W J 10k Ω	RRXAJR5Z0103
R567	CHIP RES.(1608) 1/10W J 39k Ω	RRXAJR5Z0393
R568	CHIP RES.(1608) 1/10W J 220k Ω	RRXAJR5Z0224



Ref. No.	Description	Part No.
R569	CHIP RES.(1608) 1/10W J 10k $\Omega$	RRXAJR5Z0103
R570	CHIP RES.(1608) 1/10W J 4.7k $\Omega$	RRXAJR5Z0472
R572	CHIP RES.(1608) 1/10W J 1k $\Omega$	RRXAJR5Z0102
R574	CHIP RES.(1608) 1/10W J 1k $\Omega$	RRXAJR5Z0102
R575	CHIP RES.(1608) 1/10W J 330k $\Omega$	RRXAJR5Z0334
R576	CHIP RES.(1608) 1/10W J 10k $\Omega$	RRXAJR5Z0103
R577	CHIP RES.(1608) 1/10W J 1.5k $\Omega$	RRXAJR5Z0152
R578	CHIP RES.(1608) 1/10W J 1k $\Omega$	RRXAJR5Z0102
R581	CHIP RES.(1608) 1/10W J 10k $\Omega$	RRXAJR5Z0103
R582	CHIP RES.(1608) 1/10W J 100k $\Omega$	RRXAJR5Z0104
R583	CARBON RES. 1/4W J 820 $\Omega$	RCX4JATZ0821
R584	CHIP RES.(1608) 1/10W J 100 $\Omega$	RRXAJR5Z0101
R585	CHIP RES.(1608) 1/10W J 2.2k $\Omega$	RRXAJR5Z0222
R586	CHIP RES.(1608) 1/10W J 820 $\Omega$	RRXAJR5Z0821
R588	CHIP RES.(1608) 1/10W J 470 $\Omega$	RRXAJR5Z0471
R590	CHIP RES.(1608) 1/10W J 10k $\Omega$	RRXAJR5Z0103
R601	CHIP RES.(1608) 1/10W J 1.8k $\Omega$	RRXAJR5Z0182
R602	CHIP RES.(1608) 1/10W J 1k $\Omega$	RRXAJR5Z0102
R603	CHIP RES.(1608) 1/10W J 1.2k $\Omega$	RRXAJR5Z0122
R604	CHIP RES.(1608) 1/10W J 1.5k $\Omega$	RRXAJR5Z0152
R605	CHIP RES.(1608) 1/10W J 2.2k $\Omega$	RRXAJR5Z0222
R609	CHIP RES.(1608) 1/10W J 5.1k $\Omega$	RRXAJR5Z0512
R610	CHIP RES.(1608) 1/10W J 8.2k $\Omega$	RRXAJR5Z0822
R613	CHIP RES.(1608) 1/10W J 8.2k $\Omega$	RRXAJR5Z0822
R614	CHIP RES.(1608) 1/10W J 5.1k $\Omega$	RRXAJR5Z0512
R615	CHIP RES.(1608) 1/10W J 5.1k $\Omega$	RRXAJR5Z0512
R616	CHIP RES.(1608) 1/10W J 8.2k $\Omega$	RRXAJR5Z0822
R617	PCB JUMPER D0.6-P5.0	JW5.0T
R618	CHIP RES.(1608) 1/10W J 100k $\Omega$	RRXAJR5Z0104
R624	CHIP RES.(1608) 1/10W J 10k $\Omega$	RRXAJR5Z0103
R703	CARBON RES. 1/6W J 1.8k $\Omega$ or CARBON RES. 1/4W J 1.8k $\Omega$	RCX6JATZ0182 RCX4JATZ0182
R704	CARBON RES. 1/4W J 1k $\Omega$	RCX4JATZ0102
R705	CHIP RES.(1608) 1/10W J 1k $\Omega$	RRXAJR5Z0102
R706	CARBON RES. 1/4W J 1k $\Omega$	RCX4JATZ0102
R707	CHIP RES.(1608) 1/10W 0 $\Omega$	RRXAZR5Z0000
R756	CHIP RES.(1608) 1/10W J 470 $\Omega$	RRXAJR5Z0471
R757	CHIP RES.(1608) 1/10W J 470 $\Omega$	RRXAJR5Z0471
R759	CARBON RES. 1/6W J 150 $\Omega$ or CARBON RES. 1/4W J 150 $\Omega$	RCX6JATZ0151 RCX4JATZ0151
R760	CHIP RES.(1608) 1/10W J 150 $\Omega$	RRXAJR5Z0151
R761	CHIP RES.(1608) 1/10W J 75 $\Omega$	RRXAJR5Z0750
R762	CHIP RES.(1608) 1/10W J 4.7k $\Omega$	RRXAJR5Z0472
R763	CHIP RES.(1608) 1/10W J 4.7k $\Omega$	RRXAJR5Z0472
R764	CARBON RES. 1/6W J 47k $\Omega$ or CARBON RES. 1/4W J 47k $\Omega$	RCX6JATZ0473 RCX4JATZ0473
R765	CHIP RES.(1608) 1/10W J 10k $\Omega$	RRXAJR5Z0103
R767	CHIP RES.(1608) 1/10W J 1k $\Omega$	RRXAJR5Z0102
R768	CHIP RES.(1608) 1/10W J 1k $\Omega$	RRXAJR5Z0102
R769	PCB JUMPER D0.6-P5.0	JW5.0T
R902	CHIP RES.(1608) 1/10W 0 $\Omega$	RRXAZR5Z0000
R931	CHIP RES.(1608) 1/10W 0 $\Omega$	RRXAZR5Z0000
R932	CHIP RES.(1608) 1/10W 0 $\Omega$	RRXAZR5Z0000
R933	CHIP RES.(1608) 1/10W 0 $\Omega$	RRXAZR5Z0000
R941	CHIP RES.(1608) 1/10W 0 $\Omega$	RRXAZR5Z0000
R942	CHIP RES.(1608) 1/10W 0 $\Omega$	RRXAZR5Z0000
R943	CHIP RES.(1608) 1/10W 0 $\Omega$	RRXAZR5Z0000
R1056	CARBON RES. 1/4W J 180 $\Omega$	RCX4JATZ0181
R1057	CARBON RES. 1/4W J 180 $\Omega$	RCX4JATZ0181
R1061	CARBON RES. 1/4W J 1k $\Omega$	RCX4JATZ0102
R1062	CHIP RES.(1608) 1/10W J 10k $\Omega$	RRXAJR5Z0103
R1065	CHIP RES.(1608) 1/10W J 10k $\Omega$	RRXAJR5Z0103
R1066	CHIP RES.(1608) 1/10W J 220k $\Omega$	RRXAJR5Z0224
R1067	CHIP RES.(1608) 1/10W J 22k $\Omega$	RRXAJR5Z0223
R1068	CARBON RES. 1/6W J 390 $\Omega$ or CARBON RES. 1/4W J 390 $\Omega$	RCX6JATZ0391 RCX4JATZ0391
R1071	CHIP RES.(1608) 1/10W J 10k $\Omega$	RRXAJR5Z0103

Ref. No.	Description	Part No.
R1072	CHIP RES.(1608) 1/10W J 5.6k $\Omega$	RRXAJR5Z0562
R1085	CHIP RES.(1608) 1/10W F 75 $\Omega$ or CHIP RES.(1608) 1/10W F 75 $\Omega$	RRXAFR5H0750 RRXAFR5Z0750
R1086	CHIP RES.(1608) 1/10W F 2.0k $\Omega$ or CHIP RES. 1/10W F 2.0k $\Omega$	RRXAFR5H0202 RRXAFR5Z0202
R1087	CHIP RES.(1608) 1/10W J 1k $\Omega$	RRXAJR5Z0102
R1090	CHIP RES.(1608) 1/10W J 5.6k $\Omega$	RRXAJR5Z0562
R1091	CHIP RES.(1608) 1/10W J 3.3k $\Omega$	RRXAJR5Z0332
R1205	CHIP RES.(1608) 1/10W F 20k $\Omega$ or CHIP RES.(1608) 1/10W F 20k $\Omega$	RRXAFR5H2002 RRXAFR5Z2002
R1206	CHIP RES.(1608) 1/10W F 20k $\Omega$ or CHIP RES.(1608) 1/10W F 20k $\Omega$	RRXAFR5H2002 RRXAFR5Z2002
R1207	CHIP RES.(1608) 1/10W J 8.2k $\Omega$	RRXAJR5Z0822
R1208	CHIP RES.(1608) 1/10W J 8.2k $\Omega$	RRXAJR5Z0822
R1209	CHIP RES.(1608) 1/10W F 30k $\Omega$ or CHIP RES.(1608) 1/10W F 30k $\Omega$	RRXAFR5H3002 RRXAFR5Z3002
R1210	CHIP RES.(1608) 1/10W F 30k $\Omega$ or CHIP RES.(1608) 1/10W F 30k $\Omega$	RRXAFR5H3002 RRXAFR5Z3002
R1211	CHIP RES.(1608) 1/10W J 1k $\Omega$	RRXAJR5Z0102
R1221	CHIP RES.(1608) 1/10W J 100k $\Omega$	RRXAJR5Z0104
R1222	CHIP RES.(1608) 1/10W J 100k $\Omega$	RRXAJR5Z0104
R1223	CHIP RES.(1608) 1/10W J 470 $\Omega$	RRXAJR5Z0471
R1224	CHIP RES.(1608) 1/10W J 470 $\Omega$	RRXAJR5Z0471
R1227	CHIP RES.(1608) 1/10W J 220 $\Omega$	RRXAJR5Z0221
R1228	CHIP RES.(1608) 1/10W J 220 $\Omega$	RRXAJR5Z0221
R1229	CHIP RES.(1608) 1/10W 0 $\Omega$	RRXAZR5Z0000
R1238	CHIP RES.(1608) 1/10W 0 $\Omega$	RRXAZR5Z0000
R1240	CHIP RES.(1608) 1/10W J 100k $\Omega$	RRXAJR5Z0104
R1245	CHIP RES.(1608) 1/10W J 10 $\Omega$	RRXAJR5Z0100
R1352	CHIP RES.(1608) 1/10W J 1.8k $\Omega$	RRXAJR5Z0182
R1353	CHIP RES.(1608) 1/10W J 2.2k $\Omega$	RRXAJR5Z0222
R1354	CHIP RES.(1608) 1/10W J 2.2k $\Omega$	RRXAJR5Z0222
R1355	CHIP RES.(1608) 1/10W J 220 $\Omega$	RRXAJR5Z0221
R1356	CHIP RES.(1608) 1/10W J 75 $\Omega$	RRXAJR5Z0750
R1361	CHIP RES.(1608) 1/10W J 100k $\Omega$	RRXAJR5Z0104
R1394	CARBON RES. 1/6W J 100 $\Omega$ or CARBON RES. 1/4W J 100 $\Omega$	RCX6JATZ0101 RCX4JATZ0101
R1396	CHIP RES.(1608) 1/10W J 2.7k $\Omega$	RRXAJR5Z0272
R1421	CHIP RES. 1/10W F 160 $\Omega$ or CHIP RES. 1/10W F 160 $\Omega$	RRXAFR5H1600 RRXAFR5Z1600
R1422	CARBON RES. 1/4W J 75 $\Omega$	RCX4JATZ0750
R1423	CHIP RES. 1/10W F 160 $\Omega$ or CHIP RES. 1/10W F 160 $\Omega$	RRXAFR5H1600 RRXAFR5Z1600
R1442	CARBON RES. 1/4W J 75 $\Omega$	RCX4JATZ0750
R1501	CARBON RES. 1/4W J 75 $\Omega$	RCX4JATZ0750
R1502	CHIP RES.(1608) 1/10W J 10k $\Omega$	RRXAJR5Z0103
R1503	CHIP RES.(1608) 1/10W J 6.8k $\Omega$	RRXAJR5Z0682
R2001	CHIP RES.(1608) 1/10W J 10k $\Omega$	RRXAJR5Z0103
R2002	CHIP RES.(1608) 1/10W J 10k $\Omega$	RRXAJR5Z0103
R2003	CHIP RES.(1608) 1/10W J 10k $\Omega$	RRXAJR5Z0103
R2005	CHIP RES.(1608) 1/10W J 10k $\Omega$	RRXAJR5Z0103
R2006	CHIP RES.(1608) 1/10W J 10k $\Omega$	RRXAJR5Z0103
R2067	CHIP RES.(1608) 1/10W J 10k $\Omega$	RRXAJR5Z0103
R2086	CHIP RES.(1608) 1/10W J 5.6k $\Omega$	RRXAJR5Z0562
R2093	CHIP RES.(1608) 1/10W J 22k $\Omega$	RRXAJR5Z0223
R2094	CHIP RES.(1608) 1/10W J 10k $\Omega$	RRXAJR5Z0103
<b>SWITCHES</b>		
SW501	TACT SWITCH KSM0614B or TACT SWITCH SKQSAF001A or TACT SWITCH TC-1104(H=9.5)	SST0101HH013 SST0101AL041 SST0101DNG01
SW502	TACT SWITCH KSM0614B or TACT SWITCH SKQSAF001A or TACT SWITCH TC-1104(H=9.5)	SST0101HH013 SST0101AL041 SST0101DNG01
SW503	TACT SWITCH KSM0614B or TACT SWITCH SKQSAF001A or TACT SWITCH TC-1104(H=9.5)	SST0101HH013 SST0101AL041 SST0101DNG01
SW504	TACT SWITCH KSM0614B or	SST0101HH013

Ref. No.	Description	Part No.
	TACT SWITCH SKQSAF001A or	SST0101AL041
	TACT SWITCH TC-1104(H=9.5)	SST0101DNG01
SW506	LEAF SWITCH MXS01830MVP0	SSC0101MCE03
SW507	ROTARY MODE SWITCH SSS-53MD	SSR0106KB003
SW601	TACT SWITCH KSM0614B or	SST0101HH013
	TACT SWITCH SKQSAF001A or	SST0101AL041
	TACT SWITCH TC-1104(H=9.5)	SST0101DNG01
SW602	TACT SWITCH KSM0614B or	SST0101HH013
	TACT SWITCH SKQSAF001A or	SST0101AL041
	TACT SWITCH TC-1104(H=9.5)	SST0101DNG01
SW603	TACT SWITCH KSM0614B or	SST0101HH013
	TACT SWITCH SKQSAF001A or	SST0101AL041
	TACT SWITCH TC-1104(H=9.5)	SST0101DNG01
SW604	TACT SWITCH KSM0614B or	SST0101HH013
	TACT SWITCH SKQSAF001A or	SST0101AL041
	TACT SWITCH TC-1104(H=9.5)	SST0101DNG01
SW605	TACT SWITCH KSM0614B or	SST0101HH013
	TACT SWITCH SKQSAF001A or	SST0101AL041
	TACT SWITCH TC-1104(H=9.5)	SST0101DNG01
SW2021	TACT SWITCH KSM0614B or	SST0101HH013
	TACT SWITCH SKQSAF001A or	SST0101AL041
	TACT SWITCH TC-1104(H=9.5)	SST0101DNG01
SW2022	TACT SWITCH KSM0614B or	SST0101HH013
	TACT SWITCH SKQSAF001A or	SST0101AL041
	TACT SWITCH TC-1104(H=9.5)	SST0101DNG01
<b>MISCELLANEOUS</b>		
A5	JACK BOARD(RCA) H9700ED	0VM204532
2B11	NEW SHIELD ASSEMBLY H9700ED	1VM420438
2B15	BUSH LED(F) H3700UD	0VM409508
2B46	ROHM HOLDER H7770JD	0VM304573
JK101	RGB CONNECTOR MRC-021V-03 ABS(B11	JXGL210LY006
JK1202	RCA JACK(BLACK) MSP-281V2-B	JXRL010LY062
JK1401	S TYPE JACK MDC-050V-2.4	JXEL040LY001
JK751	RCA JACK 2P MSP-282V-12 NI LF(B1	JXRL020LY121
JK752	RCA JACK(YELLOW) MSP-281V4-B	JXRL010LY003
JK753	RCA JACK(WHITE) MSP-281V1-B	JXRL010LY005
JK754	RCA JACK(RED) MSP-281V3-A	JYRL010LY002
JW006	FFC CABLE 27P FFC/P1.00/260	WX1H9700-001
JW007	FFC CABLE 18P FFC/P1.00/170	WX1H9900-001
2L082	SCREW B-TIGHT M3X8 BIND HEAD +	GBKB3080
2L082	SCREW B-TIGHT M3X8 BIND HEAD +	GBKB3080
PS502	PHOTO INTERRUPTER RPI-302C70	QPWZP1302C70
RM2001	REMOTE RECEIVER MIM-93M6DKF or	USESJRJSUNT01
	REMOTE RECEIVER PIC-37042LU	USESJRJSKK033
TP301	PCB JUMPER D0.6-P19.0	JW19.0T
TP501	PCB JUMPER D0.6-P5.0	JW5.0T
TP502	PCB JUMPER D0.6-P5.0	JW5.0T
TP503	PCB JUMPER D0.6-P6.0	JW6.0T
TP504	PCB JUMPER D0.6-P15.0	JW15.0T
TU701	TUNER UNIT TMDG9-861A	UTUNPLGAL015
VR501	CARBON P.O.T. VZ067TL1 B104 PB(F)	VRCB104HH014
X301	XTAL 4.433619MHz or	FXC445LLN004
	XTAL 1K*044334EE or	FXC445LDS002
	QUARTZ CRYSTAL 4.433619MHz or	FXC445LCHE01
	XTAL 4.433619MHz or	FXC445LLN001
	XTAL 4.433619MHz	1811388
X501	XTAL 12.000MHz or	FXD126LDS001
	QUARTS CRYSTAL 12.000000MHz	FXD126LCHE01
X502	XTAL 32.768kHz(20PPM) or	FXC323LQUA01
	XTAL 32.768kHz(20PPM)	FXC323LDS002

## DVD OPEN/CLOSE CBA

Ref. No.	Description	Part No.
	DVD OPEN/CLOSE CBA (MCV-C) Consists of the following	-----
<b>SWITCHES</b>		
SW2020	TACT SWITCH KSM0614B or	SST0101HH013
	TACT SWITCH SKQSAF001A or	SST0101AL041
	TACT SWITCH TC-1104(H=9.5)	SST0101DNG01
<b>MISCELLANEOUS</b>		
JW008	FLAT CABLE 2P AWG26#2651/P2.0/120	WX1HC460-001

## SENSOR CBA

Ref. No.	Description	Part No.
	SENSOR CBA Consists of the following	1VSA10047
<b>TRANSISTORS</b>		
Q503	PHOTO TRANSISTOR PT204-6B-12 or	NPWZT2046B12
	PHOTO TRANSISTOR MID-32A22F	NPWZ1D32A22F
Q504	PHOTO TRANSISTOR PT204-6B-12 or	NPWZT2046B12
	PHOTO TRANSISTOR MID-32A22F	NPWZ1D32A22F

## PSV CBA

Ref. No.	Description	Part No.
	PSV CBA Consists of the following	1VSA11150
	POWER SUPPLY CBA (PSV-A)	-----
	JUNCTION CBA (PSV-B)	-----
	JACK-A CBA (PSV-C)	-----

## POWER SUPPLY CBA

Ref. No.	Description	Part No.
	POWER SUPPLY CBA (PSV-A) Consists of the following	-----
<b>CAPACITORS</b>		
C013	ELECTROLYTIC CAP. 10μF/50V M or	CE1JMASDL100
	ELECTROLYTIC CAP. 10μF/50V M	CE1JMASTL100
C014	ELECTROLYTIC CAP. 470μF/16V M or	CE1CMASDL471
	ELECTROLYTIC CAP. 470μF/16V M	CE1CMASTL471
C015	ELECTROLYTIC CAP. 100μF/16V M or	CE1CMASDL101
	ELECTROLYTIC CAP. 100μF/16V M	CE1CMASTL101
C017	ELECTROLYTIC CAP. 1000μF/16V M or	CE1CMASDL102
	ELECTROLYTIC CAP. 1000μF/16V M	CE1CMZPTL102
C018	ELECTROLYTIC CAP. 470μF/6.3V M or	CE0KMASDL471
	ELECTROLYTIC CAP. 470μF/6.3V M	CE0KMASTL471
C020	ELECTROLYTIC CAP. 22μF/50V M or	CE1JMASDL220
	ELECTROLYTIC CAP. 22μF/50V M	CE1JMASTL220
C021	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V or	CHD1JZ30F104
	CHIP CERAMIC CAP.(1608) F Z 0.1μF/25V or	CHD1EZ30F104
	CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C022	ELECTROLYTIC CAP. 470μF/35V M or	CE1GMASDL471
	ELECTROLYTIC CAP. 470μF/35V M	CE1GMASTL471
C1001△	METALLIZED FILM CAP. 0.068μF/250V K or	CT2E683DC011
△	METALLIZED FILM CAP. 0.068μF/250V K or	CT2E683DC014
△	METALLIZED FILM CAP. 0.068μF/250V M	CT2E683MS037
C1004	ELECTROLYTIC CAP. 100μF/400V M	CA2H101S6016
C1005	CERAMIC CAP. SL K 56pF/ 1KV or	CCD3AKPSL560
	CERAMIC CAP. SL J 56pF/ 1KV	CCD3AJPSL560
C1006△	SAFTY CAP. 2200pF/ 250V or	CCN2EMA0E222
△	SAFETY CAP. 2200pF/ 250V	CA2E222MR049
C1007	ELECTROLYTIC CAP. 1000μF/6.3V M or	CE0KMASDL102
	ELECTROLYTIC CAP. 1000μF/6.3V M	CE0KMASTL102
C1013	CERAMIC CAP.(AX) X K 3300pF/ 16V	CCA1CKT0X332
C1018	ELECTROLYTIC CAP. 100μF/10V M or	CE1AMASDL101
	ELECTROLYTIC CAP. 100μF/10V M	CE1AMASTL101
C1021	CERAMIC CAP.(AX) F Z 0.01μF/25V	CDA1EZT0F103
C1025	CHIP CERAMIC CAP. B K 0.068μF/50V or	CHD1JK30B683

Ref. No.	Description	Part No.
	CHIP CERAMIC CAP. B K 0.068μF/25V	CHD1EK30B683
C1029	CERAMIC CAP.(AX) X K 2200pF/ 16V	CCA1CKT0X222
C1032	ELECTROLYTIC CAP. 10μF/16V M or	CE1CMASDL100
	ELECTROLYTIC CAP. 10μF/16V M	CE1CMASDL100
C1033	CERAMIC CAP. YV Z 0.022μF/50V	CCD1JZSYV223
C1035	ELECTROLYTIC CAP. 470μF/6.3V M or	CE0KMASDL471
	ELECTROLYTIC CAP. 470μF/6.3V M	CE0KMASTL471
C1106	ELECTROLYTIC CAP. 100μF/35V M or	CE1GMASDL101
	ELECTROLYTIC CAP. 100μF/35V M	CE1GMASTL101
C1107	ELECTROLYTIC CAP. 220μF/6.3V M or	CE0KMASDL221
	ELECTROLYTIC CAP. 220μF/6.3V M	CE0KMASTL221
C2014	CERAMIC CAP. B K 0.01μF/500V	CCD2JKP0B103
C2015	ELECTROLYTIC CAP. 470μF/6.3V M or	CE0KMASDL471
	ELECTROLYTIC CAP. 470μF/6.3V M	CE0KMASTL471
<b>DIODES</b>		
D013	RECTIFIER DIODE BA158 or	NDQZ000BA158
	RECTIFIER DIODE BA158	NDWZ000BA158
D014	SCHOTTKY BARRIER DIODE SB390	NDQZ000SB390
D016	SCHOTTKY BARRIER DIODE SB340	NDQZ000SB340
D017	ZENER DIODE DZ-18BSBT265 or	NDTB00DZ18BS
	ZENER DIODE MTZJT-7718B	QDTB00MTZJ18
D018	RECTIFIER DIODE BA158 or	NDQZ000BA158
	RECTIFIER DIODE BA158	NDWZ000BA158
D019	RECTIFIER DIODE FR203-B/P	NDQZ000FR203
D1001	RECTIFIER DIODE 1N4005 or	NDQZ001N4005
	RECTIFIER DIODE 1N4005	NDWZ001N4005
D1002	RECTIFIER DIODE 1N4005 or	NDQZ001N4005
	RECTIFIER DIODE 1N4005	NDWZ001N4005
D1003	RECTIFIER DIODE 1N4005 or	NDQZ001N4005
	RECTIFIER DIODE 1N4005	NDWZ001N4005
D1004	RECTIFIER DIODE 1N4005 or	NDQZ001N4005
	RECTIFIER DIODE 1N4005	NDWZ001N4005
D1006	SWITCHING DIODE 1N4148M or	NDTZ01N4148M
	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1008	SCHOTTKY BARRIER DIODE SB140 or	NDQZ000SB140
	SCHOTTKY BARRIER DIODE SB140	NDWZ000SB140
D1011	RECTIFIER DIODE BA159 or	NDQZ000BA159
	RECTIFIER DIODE BA159	NDWZ000BA159
D1012	SWITCHING DIODE 1N4148M or	NDTZ01N4148M
	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1016	RECTIFIER DIODE FR101	NDWZ000FR101
D1017	ZENER DIODE DZ-18BSBT265 or	NDTB00DZ18BS
	ZENER DIODE MTZJT-7718B	QDTB00MTZJ18
D1018	SWITCHING DIODE 1N4148M or	NDTZ01N4148M
	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1019	ZENER DIODE DZ-6.8BSBT265 or	NDTB00DZ6R8BS
	ZENER DIODE MTZJT-776.8B	QDTB00MTZJ6R8
D1022	SWITCHING DIODE 1N4148M or	NDTZ01N4148M
	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1024	SWITCHING DIODE 1N4148M or	NDTZ01N4148M
	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1025	SWITCHING DIODE 1N4148M or	NDTZ01N4148M
	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1030	SCHOTTKY BARRIER DIODE SB140 or	NDQZ000SB140
	SCHOTTKY BARRIER DIODE SB140	NDWZ000SB140
<b>ICS</b>		
IC1001 Δ	PHOTOCOUPLER EL817A or	NPEA000EL817
Δ	PHOTOCOUPLER EL817B or	NPEB000EL817
Δ	PHOTOCOUPLER PS2561A-1(Q) or	QPEQPS2561A1
Δ	PHOTOCOUPLER PS2561A-1(W)	QPEWPS2561A1
<b>COILS</b>		
L010	CHOKE COIL 47μH-K or	LLBD00PKV007
	CHOKE COIL 47μH-K or	LLBD00PKV005
	CHOKE COIL 47μH-K	LLBD00PKT001
L013	CHOKE COIL 47μH-K or	LLBD00PKV007
	CHOKE COIL 47μH-K or	LLBD00PKV005
	CHOKE COIL 47μH-K	LLBD00PKT001

Ref. No.	Description	Part No.
L1001	BEAD CORE ASSEMBLY H9900ED	1VSA11421
L1002	BEAD CORE ASSEMBLY H9900ED	1VSA11421
L1003 Δ	LINE FILTER 56MH TLF-14CB5630R2 or	LLBG00ZTU022
Δ	LINE FILTER 50MH LF-4D-E503	LLBG00ZKQ009
L1004	BEAD CORE B16 RH 3.5X10X1.3	XL03010XM001
L1005	BEAD CORE ASSEMBLY H9900ED	1VSA11421
L1009	CHOKE COIL 47μH-K or	LLBD00PKV007
	CHOKE COIL 47μH-K or	LLBD00PKV005
	CHOKE COIL 47μH-K	LLBD00PKT001
L1011	CHOKE COIL 47μH-K or	LLBD00PKV007
	CHOKE COIL 47μH-K or	LLBD00PKV005
	CHOKE COIL 47μH-K	LLBD00PKT001
L1012	CHOKE COIL 47μH-K or	LLBD00PKV007
	CHOKE COIL 47μH-K or	LLBD00PKV005
	CHOKE COIL 47μH-K	LLBD00PKT001
<b>TRANSISTORS</b>		
Q1001	FET 2SK3566	QFWZ02SK3566
Q1003	TRANSISTOR 2SC1815-GR(Te2 F T) or	QQS12SC1815F
	TRANSISTOR 2SC1815-Y(TPE2)	QQSY02SC1815
Q1004	TRANSISTOR KTA1267Y-AT/P or	NQSYKTA1267P
	TRANSISTOR KTA1267-GR-AT/P or	NQS1KTA1267P
	TRANSISTOR 2SA1175(J) or	QQSJ02SA1175
	TRANSISTOR 2SA1175(H) or	QQSH02SA1175
	TRANSISTOR 2SA1175(F) or	QQSF02SA1175
	TRANSISTOR KTA1267(Y) or	NQSY0KTA1267
	TRANSISTOR KTA1267(GR)	NQS10KTA1267
Q1008	TRANSISTOR KTC3199-Y-AT/P or	NQSYKTC3199P
	TRANSISTOR KTC3199-GR-AT/P or	NQS4KTC3199P
	TRANSISTOR 2SC1815-Y(Te2 F T) or	QQSY2SC1815F
	TRANSISTOR 2SC1815-GR(Te2 F T) or	QQS12SC1815F
	TRANSISTOR 2SC2785(J) or	QQSJ02SC2785
	TRANSISTOR 2SC2785(H) or	QQSH02SC2785
	TRANSISTOR 2SC2785(F) or	QQSF02SC2785
	TRANSISTOR KTC3199(Y) or	NQSY0KTC3199
	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR 2SC1815-Y(TPE2) or	QQSY02SC1815
	TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
<b>RESISTORS</b>		
R057	CHIP RES.(1608) 1/10W J 220k Ω	RFXAJR5Z0224
R1002	CARBON RES. 1/4W J 560k Ω	RCX4JATZ0564
R1003	CARBON RES. 1/4W J 560k Ω	RCX4JATZ0564
R1004	METAL OXIDE FILM RES. 2W J 82k Ω or	RN02JZLZ0823
	METAL OXIDE FILM RES. 2W J 82k Ω or	RN02JZQZ0823
	METAL OXIDE FILM RES. 2W J 82k Ω	RN02JZPZ0823
R1005	CARBON RES. 1/4W J 1M Ω	RCX4JATZ0105
R1006	CARBON RES. 1/4W J 1M Ω	RCX4JATZ0105
R1007	CARBON RES. 1/4W J 1M Ω	RCX4JATZ0105
R1008	CARBON RES. 1/4W G 680 Ω	RCX4GATZ0681
R1010	CARBON RES. 1/6W J 8.2k Ω or	RCX6JATZ0822
	CARBON RES. 1/4W J 8.2k Ω	RCX4JATZ0822
R1011	METAL OXIDE FILM RES. 1W J 1.3 Ω or	RN01JZLZ01R3
	METAL OXIDE FILM RES. 1W J 1.3 Ω or	RN01JZQZ01R3
	METAL OXIDE FILM RES. 1W J 1.3 Ω	RN01JZPZ01R3
R1020	CHIP RES.(1608) 1/10W J 1.8k Ω	RFXAJR5Z0182
R1021	CHIP RES.(1608) 1/10W J 1k Ω	RFXAJR5Z0102
R1022	CHIP RES.(1608) 1/10W J 4.7k Ω	RFXAJR5Z0472
R1023	CHIP RES.(1608) 1/10W F 2.2k Ω or	RRXAFR5H0222
	CHIP RES.(1608) 1/10W F 2.2k Ω	RRXAFR5Z0222
R1025	CHIP RES. 1/10W F 5.6k Ω or	RRXAFR5H0562
	CHIP RES. 1/10W F 5.6k Ω	RRXAFR5Z0562
R1029	CARBON RES. 1/6W J 100k Ω or	RCX6JATZ0104
	CARBON RES. 1/4W J 100k Ω	RCX4JATZ0104
R1032	CARBON RES. 1/4W G 1k Ω	RCX4GATZ0102
R1035	CARBON RES. 1/6W J 1k Ω or	RCX6JATZ0102
	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R1036	CARBON RES. 1/6W J 100k Ω or	RCX6JATZ0104
	CARBON RES. 1/4W J 100k Ω	RCX4JATZ0104

Ref. No.	Description	Part No.
R1037	CARBON RES. 1/6W J 10k $\Omega$ or	RCX6JATZ0103
	CARBON RES. 1/4W J 10k $\Omega$	RCX4JATZ0103
R1038	CARBON RES. 1/6W J 100k $\Omega$ or	RCX6JATZ0104
	CARBON RES. 1/4W J 100k $\Omega$	RCX4JATZ0104
R1039	CARBON RES. 1/6W J 470k $\Omega$ or	RCX6JATZ0474
	CARBON RES. 1/4W J 470k $\Omega$	RCX4JATZ0474
R1040	CARBON RES. 1/4W J 15 $\Omega$	RCX4JATZ0150
R1043	METAL OXIDE FILM RES. 1W J 2.7 $\Omega$ or	RN012R7ZU001
	METAL OXIDE FILM RES. 1W J 2.7 $\Omega$ or	RN012R7KE009
	METAL OXIDE FILM RES. 1W J 2.7 $\Omega$	RN012R7DP003
R1059	CARBON RES. 1/4W J 820 $\Omega$	RCX4JATZ0821
R1126	CHIP RES.(1608) 1/10W J 33k $\Omega$	RRXAJR5Z0333
<b>MISCELLANEOUS</b>		
AC1001△	AC CORD PE8G2CG9G0AA059	WAE0172LW009
2B33	HEATSINK H9700ED	0VM416271
F1001△	FUSE T1.6AL/250V or	PAGC20BW3162
△	FUSE 50T016H 1.6A/250V	PAGH20BHV162
FH1001	FUSE HOLDER MSF-015 or	XH01Z00LY001
	FUSE HOLDER DFH-001	XH01Z00RP001
FH1002	FUSE HOLDER MSF-015 or	XH01Z00LY001
	FUSE HOLDER DFH-001	XH01Z00RP001
T0011△	PULSE TRANS BCK-28-0552 or	LTT00EPXB019
△	PULSE TRANS CGS-SW0087A	LTT00EPSA177
2L053	SCREW S-TIGHT M3X8 BIND HEAD+	GBMS3080

## JUNCTION CBA

Ref. No.	Description	Part No.
	JUNCTION CBA (PSV-B) Consists of the following	—
<b>CONNECTOR</b>		
CN051A	242 SERIES CONNECTOR TUC-P17X-B1 WHT ST	JCTUB17TG002
<b>MISCELLANEOUS</b>		
JW001	FLAT CABLE 8P AWG26#2651/P2.0/75	WX3808S6FF07
JW002	FLAT CABLE 9P AWG26#2651/P2.0/65	WX3809S6FF06

## JACK-A CBA

Ref. No.	Description	Part No.
	JACK-A CBA (PSV-C) Consists of the following	—
<b>CAPACITORS</b>		
C101	CHIP CERAMIC CAP.(1608) B K 1000pF/ 50V	CHD1JK30B102
C102	ELECTROLYTIC CAP. 1 $\mu$ F/50V M or	CE1JMASDL1R0
	ELECTROLYTIC CAP. 1 $\mu$ F/50V M	CE1JMASTL1R0
C103	ELECTROLYTIC CAP. 100 $\mu$ F/16V M or	CE1CMASDL101
	ELECTROLYTIC CAP. 100 $\mu$ F/16V M	CE1CMASTL101
C105	CHIP CERAMIC CAP. B K 2200pF/ 50V	CHD1JK30B222
C106	CHIP CERAMIC CAP.(1608) CH J 470pF/ 50V or	CHD1JJ3CH471
	CHIP CERAMIC CAP. CG J 470pF/ 50V	CHD1JJ3CG471
C108	ELECTROLYTIC CAP. 470 $\mu$ F/6.3V M or	CE0KMASDL471
	ELECTROLYTIC CAP. 470 $\mu$ F/6.3V M	CE0KMASTL471
C110	CERAMIC CAP.(AX) X K 2200pF/ 16V	CCA1CKT0X222
C111	CHIP CERAMIC CAP.(1608) CH J 470pF/ 50V or	CHD1JJ3CH471
	CHIP CERAMIC CAP. CG J 470pF/ 50V	CHD1JJ3CG471
C119	CHIP CERAMIC CAP. B K 2200pF/ 50V	CHD1JK30B222
<b>DIODES</b>		
D112	ZENER DIODE DZ-11BSAT265 or	NDTA00DZ11BS
	ZENER DIODE MTZJT-7711A	QDTA00MTZJ11
D113	ZENER DIODE DZ-11BSAT265 or	NDTA00DZ11BS
	ZENER DIODE MTZJT-7711A	QDTA00MTZJ11
<b>COIL</b>		
L102	BEAD CORE ASSEMBLY H9900ED	1VSA11421
<b>TRANSISTORS</b>		
Q103	TRANSISTOR 2SA1015-GR(T2 F T) or	QQS12SA1015F
	TRANSISTOR KTA1266(GR) or	NQS40KTA1266
	TRANSISTOR 2SA1015-GR(TPE2)	QQS102SA1015

Ref. No.	Description	Part No.
<b>RESISTORS</b>		
R111	CARBON RES. 1/6W J 220 $\Omega$ or	RCX6JATZ0221
	CARBON RES. 1/4W J 220 $\Omega$	RCX4JATZ0221
R114	CARBON RES. 1/4W J 820 $\Omega$	RCX4JATZ0821
R117	CARBON RES. 1/4W J 510 $\Omega$	RCX4JATZ0511
R118	CARBON RES. 1/6W J 4.7k $\Omega$ or	RCX6JATZ0472
	CARBON RES. 1/4W J 4.7k $\Omega$	RCX4JATZ0472
R120	CARBON RES. 1/4W J 68 $\Omega$	RCX4JATZ0680
R123	CARBON RES. 1/4W J 820 $\Omega$	RCX4JATZ0821
R125	CARBON RES. 1/6W J 4.7k $\Omega$ or	RCX6JATZ0472
	CARBON RES. 1/4W J 4.7k $\Omega$	RCX4JATZ0472
R126	CHIP RES.(1608) 1/10W J 75 $\Omega$	RRXAJR5Z0750
<b>MISCELLANEOUS</b>		
JK1402	RGB CONNECTOR MRC-021V-03	JXGL210LY003
JW003	FLAT CABLE 10P AWG26#2651/P2.0/190	WX3810S6FF19

## AFV CBA

Ref. No.	Description	Part No.
	AFV CBA Consists of the following	1VSA11120
<b>CAPACITORS</b>		
C1	CHIP CERAMIC CAP.(1608) F Z 0.1 $\mu$ F/50V or	CHD1JZ30F104
	CHIP CERAMIC CAP.(1608) F Z 0.1 $\mu$ F/25V or	CHD1EZ30F104
	CHIP CERAMIC CAP. FZ Z 0.1 $\mu$ F/50V	CHD1JZ3FZ104
C4	CHIP CERAMIC CAP. CH J 56pF/ 50V or	CHD1JJ3CH560
	CHIP CERAMIC CAP. CG J 56pF/ 50V	CHD1JJ3CG560
C5	CHIP CERAMIC CAP.(1608) CH J 22pF/ 50V or	CHD1JJ3CH220
	CHIP CERAMIC CAP. CG J 22pF/ 50V	CHD1JJ3CG220
C6	CHIP CERAMIC CAP. CH J 56pF/ 50V or	CHD1JJ3CH560
	CHIP CERAMIC CAP. CG J 56pF/ 50V	CHD1JJ3CG560
C7	CHIP CERAMIC CAP. CH C 3pF/ 50V or	CHD1JC3CH3R0
	CHIP CERAMIC CAP. CJ C 3pF/ 50V or	CHD1JC3CJ3R0
	CHIP CERAMIC CAP. CH D 3pF/ 50V	CHD1JD3CH3R0
C8	CHIP CERAMIC CAP. CH C 3pF/ 50V or	CHD1JC3CH3R0
	CHIP CERAMIC CAP. CJ C 3pF/ 50V or	CHD1JC3CJ3R0
	CHIP CERAMIC CAP. CH D 3pF/ 50V	CHD1JD3CH3R0
C11	CHIP CERAMIC CAP.(1608) B K 0.01 $\mu$ F/50V	CHD1JK30B103
C12	ELECTROLYTIC CAP. 10 $\mu$ F/16V M H7	CE1CMASL100
C13	CHIP CERAMIC CAP.(1608) B K 0.01 $\mu$ F/50V	CHD1JK30B103
C14	CHIP CERAMIC CAP.(1608) B K 0.01 $\mu$ F/50V	CHD1JK30B103
C15	ELECTROLYTIC CAP. 10 $\mu$ F/16V M H7	CE1CMASL100
C16	ELECTROLYTIC CAP. 10 $\mu$ F/16V M H7	CE1CMASL100
C17	CHIP CERAMIC CAP.(1608) F Z 0.1 $\mu$ F/50V or	CHD1JZ30F104
	CHIP CERAMIC CAP.(1608) F Z 0.1 $\mu$ F/25V or	CHD1EZ30F104
	CHIP CERAMIC CAP. FZ Z 0.1 $\mu$ F/50V	CHD1JZ3FZ104
C19	CHIP CERAMIC CAP.(1608) F Z 0.1 $\mu$ F/50V or	CHD1JZ30F104
	CHIP CERAMIC CAP.(1608) F Z 0.1 $\mu$ F/25V or	CHD1EZ30F104
	CHIP CERAMIC CAP. FZ Z 0.1 $\mu$ F/50V	CHD1JZ3FZ104
C20	ELECTROLYTIC CAP. 3.3 $\mu$ F/50V M H7	CE1JMASSL3R3
C21	CHIP CERAMIC CAP.(1608) F Z 0.1 $\mu$ F/50V or	CHD1JZ30F104
	CHIP CERAMIC CAP.(1608) F Z 0.1 $\mu$ F/25V or	CHD1EZ30F104
	CHIP CERAMIC CAP. FZ Z 0.1 $\mu$ F/50V	CHD1JZ3FZ104
C22	ELECTROLYTIC CAP. 10 $\mu$ F/16V M H7	CE1CMASL100
C24	ELECTROLYTIC CAP. 0.22 $\mu$ F/50V M H7	CE1JMASSLR22
C27	CERAMIC CAP.(AX) F Z 0.1 $\mu$ F/25V	CCA1JZTFZ104
<b>CONNECTOR</b>		
CN1	ANGLE PIN HEADER 9P IMSA-6029B-1-09Z003-	JTED009ER045
<b>DIODES</b>		
D2	SWITCHING DIODE 1N4148M or	NDTZ01N4148M
	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
<b>IC</b>		
IC1	IC AUDIO PROCESSOR MSP3407G-QG-B8-V3	NSZBA0SP3004
<b>COILS</b>		
L1	INDUCTOR 10 $\mu$ H-K-26T	LLAXKATTU100
L2	PCB JUMPER D0.6-P5.0	JW5.0T



Ref. No.	Description	Part No.
L3	INDUCTOR 18 $\mu$ H-K-26T	LLAXKATTU180
L4	INDUCTOR 10 $\mu$ H-K-26T	LLAXKATTU100
<b>RESISTORS</b>		
R1	CHIP RES.(1608) 1/10W J 1k $\Omega$	RRXAJR5Z0102
R4	CHIP RES.(1608) 1/10W J 120k $\Omega$	RRXAJR5Z0124
R5	CHIP RES.(1608) 1/10W 0 $\Omega$	RRXAZR5Z0000
R6	CHIP RES.(1608) 1/10W 0 $\Omega$	RRXAZR5Z0000
<b>MISCELLANEOUS</b>		
X1	XTAL 18.432MHz	FXD186LLN001